A Case Study investigation into the potential use of Digital Media in the promotion of Healthy Eating amongst Youthreach Learners.

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Master of Arts (Digital Media Development for Education)

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2010

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Submitted to the University of Limerick

October 2010

Declaration

I hereby declare that this is my own work and that it has not been submitted for the award of any degree at any other university

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Abstract

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This case study examines the challenges associated with the use of Digital Media in the area of Food and Nutrition amongst Youthreach learners. The Irish government has made huge investments in the ICT infrastructure for schools and is currently doing the same in the area of health promotion. The purpose of this study is to look at the amalgamation of these two areas

Interviews with Youthreach Food and Nutrition teachers and the Youthreach literacy coordinator were conducted in a semi structured format. The inclusion of the literacy coordinator is important as the integration of literacy across the curriculum is a priority within the Youthreach programme. Focus groups and observations were conducted with students along with questionnaires.

The study begins an examination of the positive and negative factors that ICT/computers may have, on both staff and students followed by an overall look at the impact that Food and Nutrition has on lifestyles and health. Finally the study looks at the relationship between early school leavers, health and poverty.

The findings of this study reveal that both staff and students are very positive in relation to the integration of ICT/computers within the subject area. Time management, training and resources need to be looked at. Management need to address the fact that students have indicated a preference for learning with ICT/computers within this subject area. The findings from the study indicate that more emphasis needs to be placed on subject specific software, allowing for differentiation within the classroom.

Acknowledgements

I would like to express my thanks and gratitude to my supervisor Mr Joe Collins for his assistance, advice, patience and understanding during this study.

Thank you to staff and students of the Youthreach programme for their cooperation and time.

A very special word of thanks to my brother Noel, for his help, support and all his proofreading.

Finally, a sincere thanks to my wonderful partner Shane for his endless patience, continuous support, encouragement and understanding during the thesis.

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List of Abbreviations

CSHE	Centre for the Study of Higher Education
DfES	Department of Education and Skills
DoHE	Department of Health and Children
ESRI	Economic and Social Research Institute
FETAC	Further Education and Training Awards Council
HBSC	Health Behaviour in School-aged Children
HSE	Health Service Executive
ICT	Information and Communications Technology
INTO	Irish National Teachers Organisation
IOFT	International Obesity Task Force
MORI	Market and Opinion Research
NCCA	National Council for Curriculum Assessment
NCTE	National Centre for Technology in Education
NHPS	National Health Promotion Strategy
NYCI	National Youth Council of Ireland
NYHP	National Youth Health Promotion
SLAN	Survey of Lifestyles, Attitudes and Nutrition
SLO	Specific Learning Outcomes
SPHE	Social, Personal and Health Education
TAFE	Technical and Further Education
USB	Universal Serial Bus
VEC	Vocational Education Committee
VET	Vocations, Education and Training
WHO	World Health Organisation
YRC	Youth Research Centre

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Chapter 1 Introduction

1.1 Introduction

Information and Communication Technologies (ICTs) have impacted on almost every area of our lives over the last few decades. The education sector has not been immune to this and has embraced technology enthusiastically in an effort to enhance the learning experience. The integration of ICT into classroom environments has been heavily promoted, particularly in the last 15 to 20 years. It has been claimed that the use of ICT can assist learners learn and change the way that teachers teach (Wishart and Blease 1999; DfES 2003). Consequently, governments have invested significant finances into the acquisition of hardware, software and associated ICT equipment for schools and learning institutions.

This study examines the use of ICT/computers for teaching Food and Nutrition in a Youthreach Centre. It also examines the attitudes of teachers and students towards the use of ICT/computers within this learning environment. It looks at the possible use of ICT/computers with Youthreach students that experience literacy difficulties. In particular, the study examines the potential benefits from the use of ICT/computers in teaching the FETAC (Further Education and Training Awards Council) Level 3 module, Food and Nutrition.

ICT and the use of computers have become a central component of our professional and social lives (Grabe and Grabe 2004). The use of technology has grown in importance within the education sector and its use has brought about widespread changes in teaching. Teachers are a factor in technology integration (Ertmer and Hruskocy 1999). Their actions, beliefs and attitudes can influence educational change.

Educational inclusion can be seen nationally as one of the key drivers of social inclusion and economic integration. Increased expenditure alone has not been shown to solve the problem of educational disadvantage. "Equality in education matters…because education is indispensable for the full exercise of people's capabilities, choices and freedoms in an information driven age" (Baker *et al* 2004, P.141).

The Department of Health and Children (DoHE) has responsibility for health and personal social services. In 2005, a new Health Service Executive (HSE) took responsibility for the management and budget of the health services as a single national entity and is responsible to the Minister of Health.

1.2 Statement of Topic

Research has shown that some teachers are reluctant to implement ICT/computers into their working area. This is due to a number of factors including fear, lack of resources and time management issues (Ertmer *et al* 2001).

Learning in the traditional sense is seen as separating the student from social interaction and towards seeing education as a one-on-one relationship between the learner and the material to be learnt (Dewey 1997). Social learning, in which ICT and the computer can play a huge role, cannot be undervalued. Interactive technologies provide environments which encourage the learner to become involved. From a social system point of view, the design, tools and learning environment are changing, together with the development of information and communication technology.

Educational software exists to reinforce learning and studies have shown that many students do indeed benefit from the use of software (Panagiotakopoulos and Ioannidis 2001). Specific software has been designed to cater for many different subjects including literacy and software is now as common as books in the learning

environment. This can have advantages for students who may experience literacy difficulties; however teachers need to determine how useful and appropriate a piece of software might be for the student. Teachers have to decide when and how to use software within the classroom environment. They need to look at the different students they have and the different ways in which they learn. Becker and Ravitz (1999) believe that teachers should utilise teaching methods that allow different students to be doing different things at the same time. Differentiation within the classroom environment is a core characteristic of the Youthreach programme.

1.3 The objectives of this study

This study aims to evaluate the use of ICT/computers during a practical subject within the Youthreach programme. The particular subject focused on, for the purpose of this study, was FETAC Level 3 Food and Nutrition. Under the auspices of the Vocational Education Committee (VEC), the Youthreach programme offers FETAC accreditation.

The objectives of this study are to establish:

- If Youthreach students learn more effectively using ICT/computers during their FETAC Food and Nutrition class.
- The level of ICT usage by FETAC Food and Nutrition teachers.
- The attitudes that these teachers have towards the potential benefits of ICT use in their subject area.
- The role that ICT/computers can play in literacy development and literacy integration across the Youthreach programme

1.4 A case study approach

This is a case study based on the Youthreach programme. The ethos of the Youthreach programme is to offer a balanced programme of education, training and personal development to all the young people on the programme.

The case study approach works well within the Youthreach setting. The 'case' that forms the basis of this study already exists. It exists prior to the study and will continue to exist once the research has finished (Denscombe 2007). The Youthreach Centre at the core of this study is based in the North West of Ireland. It draws learners from both urban and rural areas and in recent years has seen an increased intake of non national learners. Members of the traveller community also comprise a significant percentage of learners in this study. The Centre has 40 places available for early school leavers and is currently operating at near maximum capacity.

A questionnaire, surveying three quarters of the students on the programme, was carried out. Semi-structured interviews were carried out with both FETAC Food and Nutrition teachers and also with the literacy coordinator on the programme.

Focus groups are important as they allow the researcher to obtain information on what people think about an issue (Bell 2005). Focus groups and observation was held with two groups of students, along with sessions during their communications class, discussing the concept of ICT and what it means to them. Each focus group consisted of five students from various backgrounds, age, ability, gender and nationality.

1.5 Significance of the study

Obesity is a huge health problem in both Ireland and Europe. It has been described by the World Health Organisation (WHO) as a global epidemic. In Ireland approximately 39% of adults are overweight and 18% are obese. Obesity is fast becoming one of the most prevalent childhood diseases in Europe. Fostering an understanding and knowledge of good nutritional health amongst adolescents will help prevent health problems such as obesity and diabetes in the future. Prejudice continues to exist against the overweight and obese. This is because the embarrassment attached to obesity could be seen as a motivation to lose weight. However, such embarrassment actually adds to feelings of low self esteem and could actually exacerbate the problem. Without changes in societal attitudes toward obesity and in the widespread weight prejudices that exist, coping strategies to deal with feelings of inadequacy may have limited success.

We live in a world that is continuously changing. Rapid change is constant and much of what is taught to the present day student will be outdated in the future. Therefore, is it important to enable people to learn how to learn. Part of education must be to teach people how to seek out information and how to adapt and change. This is also one of the goals of person-centred learning (Rogers and Freiberg 1994). Young people are under immense social pressure. Immature parenting, commercialisation, overcrowded schools, unemployment, widespread explicit pornography and premature sexualisation are some of the factors that can leave young people feeling isolated and socially detached. Most still mange to cope but those who do not, need help. They need it first from their families and then from the state.

1.6 Structure of the thesis

The Literature Review in Chapter Two looks at early school leavers and the rationale for the Youthreach programme. Other studies related to early school leavers both in Ireland and further afield will be reflected upon. The systems in place in some other

countries in dealing with the issue of early school leavers will be considered. The review examines the impact that early school leaving can have on poverty, health and lifestyle. It also looks at governmental and school perspectives on health issues. It describes teaching methodologies along with factors that may prevent the use of ICT. The chapter concludes by examining the benefits of using ICT for both teachers and students.

Chapter Three, Methodology, explains the methodology used in the study. It outlines the aims of the study. It describes the methods used for data collection and the rationale for each of the research methods. It also outlines how the findings were analysed.

Chapter Four presents the findings of the study. These were presented in the context of the research questions, while Chapter Five provides a discussion of the research findings from Chapter Four. It also draws on the literature review from Chapter Two.

Chapter Six summarises the main issues arising from the findings and discussion chapters. It also outlines recommendations based on these findings.

Chapter 2 Literature Review

2.1 Introduction

The Education Welfare Act, 2000 states, that the minimum school leaving age in Ireland is 16, or earlier, if three years of post primary education are completed (Department of Education and Science 2000). In 2000, the Economic and Social Research Institute (ESRI) published its report on the 1999 Annual School Leavers Survey. This report was based on two thousand eight hundred school leavers during 1997 and 1998 (McCoy and Williams 2000). Findings from this survey showed that participation in further education and training courses are lowest for those who have left the formal education system with no qualifications, with 80% of those surveyed not participating in any programme. It highlighted that those with no qualifications are most at risk of unemployment or low pay. Two out of every five unqualified early school leavers are unemployed. Unqualified early school leavers also spend on average, one year out of work and earn on average, at least 22% less than the mean hourly earnings of other school leavers who have entered employment (ESRI 2000).

This chapter will look at some relevant literature in the area of early school leavers and the impact that this has on, in particular, education and health and the influence these areas can have on a person's future and life. These three areas can have a huge impact on what outcomes a person may have in their life in relation to career and health. Knowledge in this area is important for young people in developing lifeskills.

The author will look at the benefits of using ICT both from the perspective of the teacher and the student. The author would like to establish if there are benefits from the use of ICT in the subject of Food and Nutrition, within a Youthreach setting and the positive impact that this could have on health and education.

Youthreach was established over 20 years ago as a response to the varying needs of young people at that time. Students attending Youthreach programmes are between the ages of fifteen and twenty years. Students come from all backgrounds and cultures. Currently, the programme in this particular research study, draws 37.5% of its students from the travelling community along with students from Poland and Indonesia. Literacy and numeracy levels in Youthreach may be lower than the school age. Students that have difficulties with reading and written language often have negative perceptions towards all writing and text and this can create within them negative perceptions in their own ability to communicate, especially through writing (Gregg and Mather 2002).

The Further Education and Training Awards Council (FETAC) is the primary accreditation body used within Youthreach. It is the national awarding body for further education and training in Ireland. It was set up as a statutory body in 2001 by the Minister for Education and Science under the Qualifications Act of 1999 (Department of Education and Skills 2008). Two of the FETAC subjects that are available on the Youthreach programme are Food and Nutrition and Food and Cookery. Both of these subjects are offered within the programme at Level 3. These subjects are important within the programme, as they offer essential lifeskills to the students. Both subjects offer a combination of academic and practical lessons. General nutritional knowledge along with practical cookery lessons are among the Specific Learning Outcomes (SLOs) that need to be achieved in order to be successful within the subject.

2.2 Accommodating all Students

In 2006 Minister for Education and Science, Mary Hanafin and Minister of State, Síle De Valera announced a €2 million initiative to support young people with special needs in Youthreach. Minister Hannifin acknowledged that

> "Young people enrolled in Youthreach centres throughout the country need additional supports to enable them to develop skills which will ensure they can reach their full potential, socially, personally and educationally".

De Valera acknowledged that

> "the practical supports for these young students with special education needs that are available in mainstream post-primary schools do not transfer to Youthreach, however this new proposal will address the special education needs of the Youthreach student"
>
> (Department of Education 2006)

Information and Communication Technology (ICT) has become widely available in schools as well as in Youthreach programmes and this availability has led to a dramatic change in the way that students learn and teachers teach. Some believe that students with learning difficulties are those whose learning style is not harmonious with the learning requirements of mainstream school settings. These students may not fit into the mould. Teachers need to recognise that different learning styles require different responses.

Becker and Ravitz (1999) believe that teachers should develop teaching methods that allow for differentiation within the classroom and can allow for different students doing different things at the same time. This fits neatly with the ethos of Youthreach, as class sizes are small and different students can be accommodated. However the constraints of the education system can also hinder the integration of ICT and "education and teacher are tied to specific content of education, timetables, amount of face-to face- instruction, instruction time, classrooms" (Jager and Lokman 1999, P.2)

If teachers were freed from the curriculum and exam requirements for a period of time, this could assist in the integration of ICT (Henry and Clements 1999). This is supported by the Educational Disadvantage Committee who believe a shift from "the current programme-based approach to a more flexible, planned and integrated response to meeting identified individual needs at local level" (Department of Education and Science 2004).

2.3 The Rationale for Youthreach

Students in the Irish secondary education system may feel that they are not treated fairly at times and that they would be unable to tell a teacher about difficulties that they may have (O'Sullivan 1999). This can lead to feelings of failure and alienation from school and these feelings can then result in negative behaviours that can cause further isolation and exclusion from mainstream education.

An alternative to mainstream secondary education in Ireland is provided by Youthreach (Stokes and O Connell 2000).

A lot of students that attend Youthreach programmes have experienced a history of failure and their poor ability often leads to poor motivation and habitually low levels of productivity. The Education for Persons with Special Educational Needs Act (2004), states that it will assist children with disabilities to leave school with the skills necessary to participate in social and economic activities within society and to live independent and fulfilled lives (Department of Education and Science 2004). Today, some people believe that children with learning difficulties are those whose learning style is not harmonious with the learning requirement of most school settings. The effect of class size has been a contentious issue in education. Project STAR in Tennessee, USA looked at the effect of class size and found that being in a smaller class had a positive effect on the student's academic achievements and that they were more likely to graduate from high school (Finn *et al* 2005).

The "rates of educational underachievement and early school leaving remain much higher for pupils from disadvantaged communities than for other pupils" (Department of Education and Skills 2003, p.8). A study of early school leavers in Athlone, Ireland, found that the majority of them were from working class backgrounds and that they were hampered by social, educational and economic disadvantage (Morgan *et al* 2008). Young people that are outside employment or education are more likely

to continue being disadvantaged during adulthood and to experience sub optimal health (Graham and Power 2004).

2.4 Traditional Teaching Methodologies

The traditional role of the teacher in the classroom is that of an individual whose purpose is to transmit information and knowledge to the student. Traditional learning is directed towards isolating the learner from social interaction and towards seeing education as a one–on–one relationship between the learner and the material to be learnt (Dewey 1997). The integration of technology within the classroom causes a change in this traditional role and an acceptance from the teacher that they now have a different role in the classroom. Parr (1999) indicated that teachers who were content with their current teaching approaches see no reason to put in the amount of time and effort required to integrate technology. They will no longer be the instigator and controller of activities for students. Some teachers are resistant to this new role (Hannafin and Savenye 1993). Ertmer and Hruskocy (1999) argue that a teacher's enthusiasm is essential in tackling more difficult barriers to technology use.

Many teachers are concerned about the issue of control within the classroom (Lawson *et al* 1997). For some teachers, maintaining order and control in the classroom, is their first priority (Cox *et al* 1999a). Effective classroom management is an important aspect of a teacher's role and it can be one of the most difficult problems encountered, especially by those beginning their teaching careers (Arends 2006).

Sandholyz *et al* (1990, p.78) believe that "Instructional innovations are not likely to occur until teachers have achieved a significant level of mastery over management issues". This is a huge area of concern in Youthreach where behavioural issues are an ongoing concern and incidences of inappropriate behaviour by some students can occur regularly.

Different approaches are taken by teachers in relation to using technology within the classroom. Evans-Andris (1995) found two strategies that teachers demonstrated when using technology: distancing or embracing. Some teachers distance themselves from technology and would for example book computer rooms and resources but not use them. Other teachers embrace technology by trying out new resources and being willing to spend time on technology. New technology and the integration of ICT into schools have led to teachers having to rethink the nature of their work and their methods of communication (Clifford *et al* 2004).

2.4.1 Teacher Centred and Student Centred Learning

Some teachers teach in a teacher centred way, with the teacher instructing the class and delivering information to the student. Drill and practice based ICT exercises fit into this style of teaching. Other teachers teach in a student centred way, where the teacher constructs the environment and the students are encouraged to work in an active way and construct their own knowledge. Quality teaching and learning within an ICT environment is associated with the pedagogical principle of student-centred education (American Distance Education Consortium 2003). Dexter *et al* (1999) believe that teachers that use technology range along a continuum of instructional styles and that these can vary between instructional and constructional styles. Teachers need to be able to construct an environment and activities for the student, which will allow the potential of both the student and technology to be realised (Dawes 2001).

Traditional methods of teaching about health and nutrition have incorrectly assumed that an increase in factual information about nutrition will lead to behavioural and lifestyle changes. General dietary recommendations and advice to reduce calorie intake, do not have a sufficient impact on the general population (Eurodiet 2000). Currently, within the Food and Nutrition module, there is no standard text book or resources that are used nationally. Each individual teacher, even those operating within the same centre and programme, can have different worksheets and different

means of assessment. This can have both advantages and disadvantages. It can be an advantage as it can cater to the individual needs of the student, which is a huge part of the Youthreach ethos. However the disadvantage is that standards and levels may vary across programmes and centres.

2.5 The benefits of ICT in education for students

Because students are familiar with so many electronic resources, their expectation in terms of learning environments is very different to a few years ago (Keen 2006). Individuals who regularly use blogs and social networking sites may naturally respond better in a technology rich classroom, where there is a free flow of information. Technology and the tools used to assist with ICT learning, are acknowledged as significant factors influencing the learning outcomes for students (Benjamin 2000). Classroom based ICT allows for students to work independently, in pairs or in groups. It also facilitates students to use specific software packages that allow them to concentrate on individual learning needs while still being part of the class. Eraut and Hoyles (1989) examined the role of computers during group work. They stressed the importance of the relationship between the teacher and student and this is emphasised in the ethos of Youthreach.

2.5.1 Promoting Social Interaction and Dialogue

Social interaction, often through communication, is an essential ingredient in the learning process and the use of computers allows real life learning to take place within the classroom. Bandura (1977) placed importance on the social environment whilst learning is taking place. Jarvis (2001) stressed that the education process cannot be separated from the social context in which it appears. Vygotosky (1978) argued that the development of language and the communication of ideas were central to learning and development. Vygotosky asserted that it is language which makes thinking even a possibility. He believed that language was the difference between thinking on a basic level and being able to think on a higher level.

Interacting with others allows for variety in learning and the openness to new ideas and concepts. It has been shown that an interactive environment reduces feelings of anxiety and apprehension on the part of the child (Bethge *et al* 1982) and offers the best circumstances for the child to demonstrate their intellectual skills (Frederickson 1993). The integration of ICT within the curriculum offers opportunities for students to experience the outside world within the safety of their classroom. This experience makes the learning environment more real to the student and some believe that the influence of the environment on the learning process has become an important element within constructivist learning (Bandura 1977). Interacting with others through the use of ICT can also offer students the time, space and freedom to escape from difficult family situations. Unfortunately this can all too often be the situation for a Youthreach learner. ICT use, as opposed to alcohol and drug taking, anti-social behaviour and crime can be seen as a meaningful recreational activity.

2.5.2 Promoting Motivation and Confidence

In 2002 England's Department of Education and Skills (DfES) commissioned a study to investigate the motivational effect of ICT use on students. Key findings in the study were that both students and teachers reported that ICT had a positive motivational effect on learning. Both groups indicated that the quality of work increased and that attitudes towards classroom work were more positive and in conjunction with this, student confidence and ability to perform tasks were enhanced. Enhanced confidence amongst the "lower ability" students was widely reported.

Students reported that they gained confidence because they could do and show things that they could not do before. When students were asked directly whether they felt ICT had any effect on their confidence, 77% reported that they felt more confident when using ICT. As previously mentioned, lack of confidence is a typical characteristic of the Youthreach student. Another key finding in the study was that the motivational impact of ICT has a positive impact on school attendance and that students were better behaved in classes where ICT was used.

2.5.3 Catering for various Learning Styles

Classrooms can reflect a variety of learning styles including visual, auditory and kinaesthetic. The flexibility that technology allows can cater for various learning styles and various environments. It is the role of the teacher to try to offer learning activities that will appeal to the widest variety of learning styles. The multi-sensory style of much of the ICT software that is available can help with the different learning styles of students (NCCA 2007). Educational software exists to support learning and studies have shown that many students can prosper from the use of some software (Panagiotakopoulos and Ioannidis 2001, Frear and Hirschbuhl 1999). However, not all software is appropriate in all learning situations and not all students learn more effectively using software or indeed want to learn using software (Townsend 1997). ICT can provide students with greater opportunities to encounter success with learning and thereby help cultivate a positive approach towards the school curriculum and learning (NCCA 2007). ICT can support an independence of pupil learning. One advantage of this is that the impediment of having to rewrite things can be removed for the student.

2.5.4 Promoting Student Centred learning

Wishart and Blease (1999) assert that being in control is one of the most important factors in creating involvement between the learner and the computer. Perceptions of control are an important cognitive factor in helping to foster learning and involvement from a computer programme and these tie in with the constructivist approach to learning (Cohen *et al* 2004). The user and not the computer should be in control of initiating and controlling actions (Nielsen 2008).

Modern software and technology facilitate greater control by the learner themselves of the learning process. This in turn allows for more freedom for the learner to engage in self-directed learning. Such self-directed learning should be more meaningful and more connected to existing knowledge. The learner can take

responsibility for their own learning. One teacher from the Department of Education and Skills (DfES) study stated that because "they believe they are more independent they become more independent" (DfES 2003). The study also found that the visual, kinaesthetic and auditory forms of ICT, engage students to a great extent.

Using technology within the classroom should enhance the thinking, decision making and problem solving skills of students (Grabe and Grabe 2001). Interactive technologies promote environments that encourage the student to become involved in learning. Interacting with others allows for variety in learning and increases the openness to new ideas and concepts. Learning that is interesting and comes from the learner requires no external incentives (Rogers 1969). The effective use of ICT in education has the ability to add to student experience by enhancing their learning (Park and Bonk 2007). Students should also benefit from the ability to work at their own pace. This places emphasis on the learner and the learning as opposed to the teacher. A person's intentions to learn are engaged and the meaning of leaning is configured through the process of becoming a full participant in a socio-cultural practice (Lave and Wenger 1991).

2.6 The benefits of ICT in education for teachers

The use of technology in teaching can offer a number of benefits. Technology and its place in education have grown in importance in the past few decades. The potential for ICT should be fully exploited in the future to enhance the learning experience of students at all stages of the education process and throughout their lives (DfES 2003).

2.6.1 Time

Time management and the productive use of time plays an important role in the preparation of work for many teachers. The use of ICT allows teachers to organise their teaching in a more efficient manner (Achacoso 2003). It also makes

administration easier for teachers (Cox *et al* 1999a). Record keeping and paper work can become less tedious with the assistance of some software packages.

2.6.2 Knowledge

Using technology for drill and practice of basic skills can be highly effective (Kulik 1994). Students usually learn more quickly and their volume of knowledge increases in courses that use these applications (Kosakowski 1998). Multimedia is used to work on class projects and e mail; mobile phones can provide opportunities to communicate via technology. Communication is after all an essential part of learning. A survey carried out by Kelly *et al* (2009) shows that 42.3% of children use e-communication to interact with friends on a daily basis. This compares to 30.9% in 2002.

2.6.3 Attitude and Beliefs

Pedretti *et al* (1999) found that teachers who use ICT on a personal level and on a regular basis were usually confident and positive users of ICT and were more likely to incorporate ICT into lessons. They also found that using ICT for the presentation of class material gave them more status and more prestige within their school, as well as enhancing their teaching and motivating students. Ertmer *et al* (2001) found that teachers, who were confident in the area of technology use, often found or invented ways around barriers such as lack of resources, time and knowledge. Bennett (1996) also found that teachers who were confident in their technology ability and skill had a reasonably high sense of motivation and that they would be more willing to integrate new teaching methodologies.

2.6.4 Access

Research has shown that when computers are available in classrooms rather than in specific computer rooms, the use of ICT by both student and teacher become an

integral part of teaching and learning and active teacher and student involvement are the foundations of an effective learning environment (NCCA 2007). This availability can also allow for differentiation within the classroom which is essential within the Youthreach setting. The availability of computers within classrooms also allows students to access various software packages which can build their literacy and numeracy skills.

2.6.5 Professional Development

The integration of ICT into the curriculum has implications for the professional development of teachers (NCTE 2001). The use of ICT in education can increase a teacher's self confidence and make them feel good (Moseley *et al* 1999). Becker and Ravitz (1999) reported that teachers who continuously updated their skills and who used technology consistently in their classes were comfortable experimenting with new technology.

2.6.6 Culture

The culture within the school environment plays a significant part in encouraging teachers to use ICT within the schools. As in most settings, many problems and challenges can be prevented, by planning and establishing procedures beforehand (Arends 2006). Teachers and students need to keep up to date as new ICT concepts are constantly being developed and many of these concepts can have an impact in the learning environment (NCTE 2002).

2.7 Factors preventing ICT integration for teachers

Teachers are often intimidated by technology because they lack skills and knowledge in this area, while the student, as a result of growing up with a variety of technologies, may have a greater grasp of the skills needed to operate in the world of technology (Peterson 1999). The teacher may feel that students have an advantage

over them and this can contribute to their reluctance to embrace the world of technology. Being uncomfortable with the technological environment is an important barrier, which needs to be overcome, in order for an effective learning environment to be established.

This new mode of instruction and teaching is challenging for many teachers. Using technology is a different process to using text books. Teachers now have to understand and become familiar with a new learning environment. They are required to learn and use new skills and also, perhaps more importantly, are required to change their perception of learning and teaching, which can lead to changes in pedagogy and teaching practice (Oliver 2001). Some teachers, who are accustomed to the traditional classroom and traditional methods of teaching, may find it difficult to develop pedagogical strategies to promote the use of different teaching methods within the classroom. Fullan and Stielgelbauer (1991, p.131) believe changes

> "that foster sustained professional development over one's career and lead to student benefits may be one of the few sources of revitalization and satisfaction left for teachers".

There are many factors which can influence whether a teacher will use ICT in their teaching. A few of these factors include time, knowledge, attitudes/beliefs, access, professional development and culture (Ertmer 1999; Ertmer 2005; Hew and Brush 2007).

Youthreach teachers using FETAC assessment procedures currently have no ICT resources within the Level 3 Food and Nutrition module. As previously mentioned, the use of resources is at the discretion of the teacher, but unlike the Leaving and Junior Certificate, FETAC has no nationally recognised syllabus in place.

2.7.1 Professional Development

Some teachers feel that once they have completed their teacher training they have little need for further training and this can lead to an attitude of apathy within their teaching career (Cox *et al* 1999a). Integrated technology training, during teacher training, would ease pressure for professional development at a later stage. Changing teaching style can affect a teacher's professional definition of themselves (Fullan and Stielgelbauer 1991). Barajas *et al* (2002) suggests that the use of ICT can bring about change and even the most willing teachers have to re-examine their identity as teachers.

For teachers, skill building is the first stepping stone in professional development (Bradshaw 2002). Much of the focus of professional development courses has been on a progression of skills development. Short courses do not show teachers how to integrate computers into classroom lessons (Cox and Rhodes 1990) and teachers have received very little training in this area (Vrasidas and McIsaac 2000). Technology integration needs at least five to six years of staff development to reap the maximum value (Hoffman 1996). The integration of ICT into the curriculum has implications for the professional development of teachers. Teachers have to become aware and recognise how ICT can be integrated into the learning environment and they have to develop an understanding of the impact that this has on the way that they teach.

2.8 Limitations of ICT learning

One of the most powerful tools for students is the visual contact they have with the teacher (Ledbury *et al* 2004). Unlike face to face conversations, the lack of audio and body language elements in online conversations, influences communications (Park and Bonk 2007). This process of communication is much more difficult than a voice or video chat. Because of the nature of technology, the lack of face to face interaction and non verbal communication makes it difficult to measure the success of technology in some situations. Therefore, different ways of collecting feedback and

evaluation regarding the ICT used is important (Vrasidas and McIsaac 2000) Some critics believe that learning can be hindered in an environment that doesn't have a teacher but other studies have show that this is not necessarily true (Richardson and Swan 2003).

The availability of ICT in almost every classroom has led to a dramatic change in the way that students learn. Software is now as freely available as books in the learning environment. Irrespective of this availability of technology, Oppenheimer (1997) argues that there is no evidence to suggest that computers improve teaching and learning. He believes that children need extensive exposure to sensory experiences and hands on manipulation and that computers do not support a child's development, especially at younger ages. Teachers must frequently decide when and where to use a particular piece of software, or whether to use it at all.

2.9 Literacy within Youthreach

Each student that enters the Youthreach programme is initially assessed for literacy and numeracy levels. This information is for in house purposes and results have shown that the reading age of some students can be as low as seven years. Early recognition is important because the student's difficulty needs to be understood and steps need to be taken to organise educational assistance. Shaywitz (1996) reported that if young people with reading disability are not identified and provided with intervention before reaching nine years of age, at least 74% of them will remain disadvantaged throughout their second level school years. Literacy difficulty can present itself in a variety of ways for the student. Some students accept the circumstances and will engage with their key worker and the literacy coordinator in a programme to improve their skill. Others however, can become more defensive and as a way to deflect and disguise the issue, can behave in an inappropriate manner.

Within Youthreach, there is in place a policy promoting an integrated approach to literacy. Literacy should develop from an integrated approach to language

development (Eivers *et al* 2005). Language is one of the most important accomplishments of humans. Language is a communication process which encompasses the elements of listening, speaking reading and writing. It is a lot to put together all at once and a breakdown can occur anywhere along the process. By simply doing a piece of writing in isolation and have it corrected in isolation doesn't necessarily lead to improved literacy (Eivers *et al* 2005). In order for this work to be most beneficial it needs to be supported by other activities within the classroom. Webster *et al* (1996) argue that all readers do not read different types of texts in the same way. A teacher being able to adapt and create their own individual classroom material helps to overcome this difficulty.

Many struggling students lack a sufficient vocabulary because they are not fluent readers who choose to read (Nagy and Scott 2000). Proficiency in written language requires an adequate base of oral skills. Oral language is the primary means of communication for humans. For many, words are quick, easy and direct. Writing is not a natural form of expression. When words have to be written down they become arduous and a slow and laborious task for many, especially those with learning difficulties. Learning to read is not natural or easy for most children. It is a complex linguistic process that requires effort and incremental skill development (D'Agostino and Murphy 2004).

One of the great claims for ICT is its ability to provide differentiated learning and activities for the students, all of which can contribute to individual learning. Various studies have established that computer assisted intervention has resulted in successful literacy gains (Segers and Verhoeven 2002).

Intensive literacy and numeracy programmes in America have been designed to foster academic achievement. One such programme 'Reading Recovery' has yielded positive outcomes in terms of performance (D'Agostino and Murphy 2004). A similar programme in the U.K, the 'Literacy Hour', has also been beneficial (Machin and McNally 2007). Teaching literacy across the curriculum improves not only pupil

literacy achievements but can also improve learning in other subjects (Wray *et al* 2002). Teachers working together and spending five minutes at the beginning or end of class on literacy, can see a huge improvement in the literacy levels of all students on the programme. Team teaching, also known as collaborative teaching or cooperative teaching, has been gaining momentum as a promising pedagogy within the education sector (Helms *et al* 2005). Reading programmes, with cooperative learning at the core, are inclined to be successful for yielding positive outcomes for the students (Slavin *et al* 2008). This can however, put many teachers under pressure and they have concerns that if they are focusing on literacy outside of the Communications/English class, it will take time away from their own subject. By eliciting a wide range of suitable vocabulary and concentrating on these throughout the class, the student can concentrate on specific words. Collaboration can be defined as people working together and participating in planning, sharing and goal achieving activities (Graham and Wright 1997). Schools using this approach can experience a number of benefits including improved learning for students, moral support for staff and sharing of knowledge, resources and work.

2.10 Early School leavers and education

Minister Noel Dempsey in his opening speech at the first meeting of the Forum to Address Education Disadvantage (2006), acknowledged that the traditional view of schools was very narrow and that children who experience failure can then quickly learn to accept and expect failure. He stated that "educational qualifications, or the lack of them, determine to a large extent the life chances of people" (Department of Education and Skills 2006).

He stressed that education has to offer creative solutions when responding to children's learning needs and that

> "sometimes our formal one size fits-all model of schooling seems an inappropriate response in the context of different communities with different local needs, conditions and cultures" (Department of Education and Skills 2006).

Children have to experience success if they are to have a sense of self worth. The Minister continued, stating that he believed schools should value, enhance and accredit as many forms of intelligence as possible (Department of Education and Skills 2006).

Education is essential in the promotion of the social and educational development of disadvantaged children. Educational disadvantage has been described as "a complex phenomenon resulting from the interaction of factors that are usually construed as economic, social, cultural and educational" (Kellaghan *et al* 1995, P.17). The huge number of stress factors that can result from socio-economic, cultural and educational conditions and the interaction of these factors can have a detrimental effect on a child's prospect (Leseman 2002). One in six children currently leave the Irish education system without reaching Leaving Certificate level (Smyth and McCoy 2009). Many children find the transition from primary to secondary school traumatic. It is mainly those from lower socioeconomic backgrounds that experience most difficulty during this change (Tilleczek 2007).

2.11 Early School leavers and poverty

Role models within young peoples' lives are crucial in the formation of a positive learning environment. Promoting positive attitudes towards education, as well as encouraging and fostering self esteem, are essential for the formation of a healthy and positive learning environment (O'Sullivan 1999). These factors all contribute towards the student's learning experience and what it is going to entail. Behavioural and social skills also form part of the learning programme within the Youthreach setting and for some students these skills are worked on simultaneously, whilst also focusing on the development of literacy and numeracy skills.

A recent report published in the UK by the Prince's Trust (2010), surveyed 2088 unemployed people aged between 16 and 25 years. The report claimed that young unemployed people face a lifetime of poorer health and lower levels of happiness.

This belief is supported by De Valera who reported that the majority of Youthreach students "have the kinds of problems that are associated with social exclusion" and that many of them may have left school early without formal qualifications (Department of Education and Skills 2006).

2.11.1 The Impact of Poverty on Health

Social exclusion, marginalisation and poverty can all contribute towards negative health outcomes. A study by Balanda and Wilde (2003), which looked at the links between social environment and health, reported that early school leavers were half as likely as those with third level education to have excellent or good health. Unemployment has a knock on effect on a young person's self esteem, their emotional stability as well as their overall health. The implications of youth unemployment go beyond the dole queue and do not just affect the young person while they are out of work but for many future years (Prince's Trust 2010). Overweight adolescents are less likely to marry when they become adults compared with their average weight cohorts. Obese adolescent girls complete less schooling and have lower household incomes as adults, compared to adults that are not obese (Gortmaker *et al* 1993).

Kelly *et al* (2009) report that 14% of children did not have breakfast during the week. This figure remains unchanged since 2002. The number of children that reported going to school or bed hungry has increased from 16% in 2002 to 17% in 2006 (Kelly *et al* 2009). Eating family meals together can have a positive influence on diet and this is especially important during the adolescent years (Gillman *et al* 2000). A deficient diet during adolescence has serious long and short term health consequences (Kelly *et al* 2009).

It is generally accepted that the main barriers to healthy food choices in developed countries are access to healthy foodstuffs, being able to afford them and also the amount of disposable income available (Mela 2001). The foods recommended in the

Irish healthy eating dietary guidelines, by the National Nutritional Survey Centre, are often more expensive that the less healthy options (Friel *et al* 2004). These authors also found that there is a huge discrepancy between the amount of money low income groups would need to spend in order to enjoy a healthy diet and the amount they have available to spend.

2.12 Early School leavers and health

Education influences health directly and indirectly. It influences material circumstances in later life and therefore has an indirect effect on health status. Education directly affects health outcomes by influencing people's knowledge about health behaviour and diet. Across Europe, lower levels of education are associated with poorer health, greater daily disabilities and more frequent visits to the doctor (Layte *et al* 2007).

The Living in Ireland Survey (2001), undertaken by the ESRI discovered that patients with a medial card visited their doctor on average six times a year compared to 2.3 annual visits by non medical card holders (Layte *et al* 2007). The report also found that 33% of those in the lower income group visited the dentist once a year compared to those in the higher income group (Layte *et al* 2007). All of these activities have a bearing on the financial and societal impact that this has on the country.

Excess weight and obesity have been described by the World Health Organisation (WHO) as an "epidemic" (World Health Organisation 1998). Research carried out by the Kelly *et al* found that only 19% of children eat fruit more than once a day (Kelly *et al* 2009). It also showed evidence of an influence by social class on this, with children from a higher social class reported to consume more vegetables in their diet. Children from higher social classes also reported a lower consumption of soft drinks (Kelly *et al* 2009).

The handing down of cooking skills from parent to child is disappearing and cooking and preparation of food from basic ingredients is no longer common. The National Food Alliance/MORI carried out a study in 1993. When asked "Which of these things can you do yourself?", 93% of children could play computer games and 77% could use a music centre or CD player. This compares to 54% who could make a cake and 38% who could cook a jacket potato in the oven (Sustain 1993). As these children leave home and become adults, their cooking skills may soon only involve foods that are convenient and easy to prepare.

The psychological and social difficulties associated with obesity can be related to the stigma and prejudice that obese children experience, which hinder their social development, during childhood and adolescence (Gortmaker *et al* 1993). Pearce *et al* (2002) found that obese adolescents experience more victimisation that their peers. As adolescents rely on their peers for the development of their self image, as well as acceptance and a sense of belonging, this rejection that obese adolescents experience, can have a devastating effect on their social and psychological health (Pearce *et al* 2002).

2.12.1 Social Class and Health

The Institute of Public Health in Ireland studied health outcomes between 1988 and 1998 and these outcomes were considerably different across socioeconomic groups (Harkin 2001). Thirty eight percent of those classed as being at risk of poverty, (living on an income of less than €202.50 per week), reported that they were suffering from a chronic illness. This compares to 23% of the general population (Farrell e*t al* 2008). Layte *et al* (2007) found that inferior health is often reported by those with lower levels of education, especially those that have only reached primary education. Less educated adults are less healthy because they are in poorer and less healthy circumstances, "material circumstances are the primary determinant of health outcomes" (Layte *et al 2007).*

More educated parents generally occupy a higher social class position and therefore provide greater educational opportunities for their children. Parents are a key figure in a child's life and it is entirely reasonable to recognise that a parent's life experience will have an effect on their children. There are positive role models absent in the lives of many Youthreach students and this can impact on their engagement with the programme. In areas of disadvantage and high unemployment, young people and their parents may not see the benefits of education and may opt for relying on the welfare system as a means of support.

2.12.2 Physical Activity

In the US, there has been an increase of 197% in the amount of hospitalisations associated with obesity related incidents in the past 20 years. This highlights both the health and economic implications of this lifestyle. The Centres for Disease Control and Prevention (2001), report that less than 50% of adolescents are physically active on a regular basis. It also indicated that the majority of American adults are not physically active on a regular basis. Within Europe, between 5% and 8% of deaths are attributed to physical inactivity (WHO 2004). In 2003, the Eurobarometer survey looked at physical activity patterns and trends within the European Union. Ireland was reported as having low rates of vigorous activity at 62%. It was also found that those with higher education levels, were more physically active (Wilk and Jansen 2005). Exercise and physical activity decreases with age and this is particularly noticeable among females, with 58% of 10 to 11 year old females being physically active compared to 28% of 15 to 17 year olds (Kelly *et al* 2009).

Physical activity decreases health risks yet only 1 in 5 people in Ireland are physically active (Morgan *et al* 2008). Studies have shown that television viewing and playing video games for long periods of time or not participating in sports outside of school, promotes obesity in children (Berkey *et al* 2000). Coon and Trucker (2002) assert that the combination of lifestyle factors, alongside lengthy television viewing, contribute to children becoming at risk of obesity and having poor nutritional status.

People of standard weight spend less time watching television and more time engaging in physical activity (McCarthy *et al* 2002). Excess body weight is now the biggest health concern in relation to children in Europe, affecting one in six of them. However, in some countries, this increases to one in five children (IOTF 2003). In 1948 daily nutrient amounts were within the WHO recommendations. This has not been met within the last number of years (WHO 2003). Childhood obesity is already and epidemic in some areas and is on the rise. Using existing WHO standards, it is estimated that worldwide, approximately 22 million children under five years are overweight (WHO 1998).

2.13 Government/Schools and Health Promotion

The First International Conference on Health Promotion was held in Ottawa, Canada in 1986. From this conference, the Ottawa Charter for Health Promotion, was unveiled by the World Health Organisation.

The five principles that the Ottawa Charter set out include:

- Building Healthy Public Policy
- Creating Supportive Environments
- Strengthening Community Action
- Developing Personal Skills
- Re-orientating the Health Service

2.13.1 What is the purpose of Health Promotion?

It is generally accepted that health promotion is a very worthwhile endeavour. Three basic strategies for Health Promotion are:

1. Advocate: Health is a resource for social and developmental means and therefore areas that are influenced by these factors should be changed to encourage health.
2. Enable: People should be empowered to be in control of factors that determine their health.
3. Mediate: Health promotion cannot be achieved in isolation. Collaboration with all sectors is necessary.

2.13.2 Health Promotion in Ireland

The Department of Health and Children's National Health Promotion Strategy (NHPS) 2000-2005, adopts a holistic approach to health and incorporates the five principles of the Ottawa Charter. Since the commissioning by the Health Promotion unit of SLAN (Survey of Lifestyles, Attitudes and Nutrition) and HBSC (Health Behaviour in School-aged Children) surveys in 1998 and again in 2002, have provided reliable national data on health related behaviours among Irish adults and school going children.

Health promotion has grown considerably in the past few years and there are now teams of health promotion specialists in each HSE area. While there are high levels of health promotion activity in settings such as schools, there are lower levels of activity noted in more informal youth settings. Programmes such as Social, Personal and Health Education (SPHE) operate in most post primary schools. However, the progress achieved to date in the incorporation of this programme into the curriculum has not been formally assessed.

2.13.2.1 Health Promotion within Youthreach

A holistic approach should be taken in teaching health education and it should include areas such as developing self esteem and confidence as well as effective communication skills (Department of Education and Skills 2000). Health education

should be complemented by a health promotion environment. Within the Youthreach setting, there is an opportunity to achieve Quality Health Awards. The Health Quality Initiative specifically targets the non formal education sector, within which Youthreach falls. The programme is coordinated by the National Youth Health Programme (NYHP), which is based in the National Youth Council of Ireland (NYCI) in partnership with the Department of Education and Skills and the Health promotion Unit of the Department of Health and Children.

The Health Quality Award is a comprehensive plan that aims to promote health through four main strands. These are:

1. The development of a Health Promotion policy which informs the future direction and work of the organisation in relation to health promotion.
2. The development of a youth health promotion strategy, based on a needs assessment carried out with young people, which puts in place policies, health education programmes, intervention and resources for the young people involved in that organisation.
3. A health and safety strategy which looks at the organisation as a safe and welcoming place to be.
4. The creation of a workplace health promotion strategy, based on a needs assessment with workers, which outlines future plans for training, support and the social and physical health of the organisation's workers.

The Health Quality Initiative programme involves young people working together to improve health standards in a holistic way. This in turn benefits the community and society at large, by raising awareness and coping skills, in the promotion of physical, psychological and emotional health.

In June 2010, the Department of Health and Children along with the Health Service Executive launched "Get Ireland Active". The main aims of this initiative were to

- Highlight the importance of physical activity to health
- Recommend physical activity for all ages
- Provide information to support those supporting physical activity in their work
- Give advice on where to get information

The launch of this programme indicates that the government are taking the issue of obesity seriously and are taking steps to address the problem.

2.14 Current Delivery model

> "Educationalists and psychologists agree that it is within the first six years that the foundations of an individual's linguistic, cognitive, social, creative, physical, moral and spiritual development occur. Deficits in these areas can have long term implications for the child, often affecting his or her ability to respond to the challenges provided later in the educational system"
>
> (INTO 1998)

A lot of students enter the Youthreach system not having these foundations met.

In Youthreach, the teaching process cannot simply be seen as something that is transmitted from teacher to the student. The task of the Youthreach teacher is often huge. Teachers within Youthreach could be seen as mentors. Mentors can be viewed as people who through their action and work, help others to achieve their potential (Shea 1992). Teachers need to adopt a broader view of their professional role when working with issues of educational disadvantage (Department of Education and Science 2004). They must try to regain lost interest, change negative perceptions about education, build confidence and self esteem and try to improve competence in their specialised area. Only then can the Youthreach teacher begin to teach.

2.15 International models

2.15.1 Australia

In Australia the school participation rate for 17 year olds rose from 38% in 1983 to 60% in 1993 and has remained around this figure. In 1997, 79.4% of 15 to 19 year olds were participating in education, 49.5% in school, 19.1 % in TAFE (Technical and Further Education) or other forms of Vocations Education and Training (VET) and 10.7% in higher education (James 2000). TAFE is vocational and technical training which is funded by the Australian government. It is the largest education and training scheme provided in Australia. The courses provided by TAFE are similar to Youthreach courses in that they cover practical skills and training with many leading to opportunities to further study. Generally it is believed that young Australians with low educational levels are increasingly vulnerable and are at a risk of being marginalised in the labour market.

Research was carried out in 1998 for the Centre for the Study of Higher Education (CSHE) and the Youth Research Centre (YRC) of the University of Melbourne. This research found that TAFE students had shorter term objectives and were less likely to see personal relevance in further study. It also found that student attitudes to post school options were strongly socially stratified. One third of students from a lower socioeconomic background, expressed a preference for a TAFE course, compared to 14% of students from a higher socioeconomic background. Post secondary education was seen as less relevant by rural students. Rural students, especially those from lower socioeconomic backgrounds, were less likely than urban students to believe that a university course could offer them the chance of an interesting and rewarding career. They also felt that their parents would not want them to do a university course (James 2000).

2.15.2 Italy

Barone and O Higgins (2009) studied the factors that influence early school leaving amongst adolescents in the province of Salerno in Southern Italy. They conclude that obesity has a critical effect in influencing people to leave school early. Other reasons discovered were: family background, educational attainment and experience, lifestyle and local economic conditions. These authors conclude that obesity may cause poor scholastic performance or indeed that poor academic performance can lead to obesity. They advocate policies such as increased sport in school, which may have beneficial effects in terms of reducing early school leaving rates.

2.15.3 Germany

German vocational education centres on the notion of 'dual training', which is provided by companies and vocational schools, based on mandatory training curricula. The dual training system consists of apprenticeships in a company along with vocational education in one course. Dual training can specifically cater for "school leavers with schooling deficits" (Vogler-Ludwig 2006, p.4). Secondary school types in Germany range from 'Gymnasium' which leads to an A level certificate, to 'Hauptschule' which provides a certificate to enter dual training. Vogler-Ludwig (2006), in a report on early school leaving in Germany, notes the emergence of an uneducated and demotivated underclass. He claims that the combination of low skills levels and high unemployment will exclude this group permanently from Germany's economic and social development.

2.15.4 Britain

Initials concerns with youth unemployment in Britain have more recently been replaced by a deeper worry in relation to young people that are economically inactive. These people have been referred to as the 'NEET' population, that is 'Not in Education, Employment and Training' (Dhillon 2007). The Connexions initiative was established towards the end of the 1990s to provide a personalised advice and

support service for all young people, with the aim of encouraging a reconnection with the learning process.

The Connexions initiative was complemented by another British programme called Entry to Employment (E2E). This programme began in 2002/2003 with the aim of securing work-based provision for unemployed young people aged 16-18 that were not suitable for an apprenticeship, job or further education.

The 'ReStart; Early School Leavers' project was launched by the UK government in response to early school leaving in England and Wales (Dhillon 2007). It involved collaboration with nine other European countries, in order to learn from each other's issues, interventions and good practice. The project identifies that early school leaving can be a significant contributing factor for social exclusion in later life and it further acknowledges that interventions designed for early school leavers, must be multi-faceted, sophisticated and sensitive to the complexity of their needs. The project concludes by highlighting the potential of the voluntary and community sector in tackling the problem as well as advocating the possibility of locally based solutions that may or may not apply elsewhere.

2.15.5 United States

The Alternative High School Initiative was established in the USA in 2003 to provide a more supportive personalised education that aims to fully prepare students for college, work and citizenship

Although initially viewed as a dumping ground for troubled youths and ineffective teachers, these high schools are creating educational opportunities for young people for whom traditional school settings have not been successful. They have established a variety of structures and environments that promote progress and offer options for vulnerable and marginalized young people that may require flexibility in systems and supports.

Alternative High Schools tend to be student-centered and engage heavily in project-based learning and leadership development. Similarities are to be found with the Youthreach model in that they place importance on individual learning plans as well as counselling, advocacy and advisory services (AHSI 2008).

2.16 Summary

ICT can provide students with greater opportunities to encounter success with learning and thereby help cultivate a positive approach towards the school curriculum and learning (NCCA 2007). Quality teaching and learning within ICT environments is associated with the pedagogical principle of learner-centred education (American Distance Education Consortium 2003). The effective use of ICT supports differentiation within the curriculum to suit the range of learning needs and styles of the individual student. Team teaching can also benefit students by building on their teambuilding skills and improving their interpersonal skills. (Johnson *et al* 2000).

The role of the teacher changes with the introduction of technology in the classroom. This in turn can have a very positive benefit for the overall functioning of the learning environment, especially in the Youthreach setting. Classes are conducted in a non formal setting and the relationship between the teacher and the student is conducive to a positive learning experience. Active teacher and student involvement are the foundations of an effective learning environment. All classrooms reflect a variety of learning styles. It is the role of the teacher to try and offer learning activities that will appeal to the widest variety of learning styles. The multi-sensory style of much of the ICT software that is available can help with the different learning styles of students. The effective use of ICT in education has the ability to add to student experience by enhancing their learning. This experience should not just be confined to the computer class or within the computer room; it should be used to enhance learning in all subjects within the curriculum.

The provision of nutritional information does not necessarily mean that people will change their lifestyle. One of the contributing factors to the worldwide obesity problem is that people are now leading more sedentary lifestyles. Instead of this being viewed as having a negative impact on individuals and society, it should be used as an aid to engage people in assessing their lifestyle and the choices that they make in relation to their lifestyle as well as the consequences of those choices. If people lead more sedentary lifestyles, this should be used as a motivational tool to encourage active learning to take place in the area of Food and Nutrition.

The social context and environment that people learn in is significant and contributes to their learning. Various models have been adopted to cater for early school leavers. However, the theme underpinning all such models is that young people must be engaged in whatever learning environment they are part of. Isolation, disengagement and marginalisation create a detachment that not only limits the young person's potential but also leads to social exclusion in adulthood. If young people benefit from the use of technology within the classroom, this medium should be used in assisting them to learn about the impact that their lifestyle and lifestyle choices can have in relation to their education, career and health.

Chapter 3 Methodology

3.1 Introduction

This chapter introduces the research setting and provides the rationale for undertaking the research. Research methodologies, the methods of data collection and the methods through which the results were analysed will be explained.

3.2 Background to the Study

With the launch of "Get Ireland Active" by the Department of Health and Children along with the Health Service Executive (2010), the government hoped to increase the importance of physical activity to health and overall well-being. The launch of this programme indicates that the Irish government are tackling the issue of obesity.

The government hoped to increase the use of ICT within schools with the launch of the Schools IT2000 programme in 1997. Therefore, the use of ICT within education has increased within the last decade. Alongside the academic programme, lifelong learning and the development of social skills are integral parts of the Youthreach programme. Literacy difficulties within the Youthreach setting and the role that ICT/computers can play in this area need to be examined.

3.3 Research Questions

This study aims to

- Examine if Youthreach students learn more effectively using ICT/computers during their FETAC Food and Nutrition class.
- Examine the level of ICT usage by FETAC Food and Nutrition teachers.

- Establish FETAC Food and Nutrition teachers' attitudes to the potential benefits of ICT use in their subject area.
- Establish the role that ICT/computers can play in literacy development and literacy integration across the Youthreach programme.

3.4 Research methodology

3.4.1 Research Approach

This is a case study based in a Youthreach training centre. The overall aims were to investigate if students learn more effectively using digital media and to determine if ICT/computers can play a role in literacy development and literacy integration across the Youthreach programme.

A case study methodology with an open approach was used. The "defining characteristic of the case study approach is its focus on just one instance of the thing that is to be investigated" (Denscombe 2007, p.35). Case studies are a means of investigating an isolated occurrence in greater detail than would be possible in a larger survey. This enables greater attention to be given to the subtle insights that may be obtained and therefore the study gains in depth.

The topic under research was mainly qualitative, being based on student and teacher opinions within a particular context. Action research methodology was not used. Action research is useful when "Specific knowledge is required for a specific problem in a specific situation" (Cohen and Mannion 1994, p.194). The author does not feel that this methodology would be appropriate for this study.

The study also focused on FETAC Food and Nutrition teachers and sought their opinions and attitudes around the use of ICT within their subject area. Yin (1994) indicates that single case studies cannot prove anything with the certainty of true experiments.

Use of a case study approach allows for a holistic view of a particular social event, in which the relationships and processes may be studied more directly, focusing on the interpretations of those participating in it. Cohen *et al* (2000, p.182) stress that it is important for events and situations to be allowed to "speak for themselves" rather than be largely interpreted, evaluated or judged by the researcher. A case study is an approach that may be used to investigate naturally occurring situations, which would not be possible to set up in experimental situations. By using a variety of sources of information, it is possible to gain a more rounded picture through a process of triangulation (Hayes 2000).

> "An important criterion for judging the merit of a case study is the extent to which the details are sufficient and appropriate for a teacher working in a similar situation to relate his decision-making to that described in the case study. The relatability of a case study is more important than its generalizability".

The author accepts that the results and conclusions of this study cannot be used to generalise the conditions in other Youthreach programmes.

3.4.2 Setting for the study

The study took place within a Youthreach programme in the North West of Ireland and the author is Coordinator of that programme. The emphasis on literacy, especially within practical subjects, has become important in Youthreach within the last number of years. The focus on health and a balanced diet are important factors that contribute to a healthy lifestyle. Holistic teaching and education are an integral element of the Youthreach ethos.

3.4.3 Study group

Students on the Youthreach programme range from fifteen to twenty years. The majority have left mainstream education for more than three months before joining the Youthreach programme. Academic and behavioural issues are the main but not exclusive reasons, given by students as why they have left mainstream education.

The students that participated in this study are currently enrolled on the Youthreach programme. The programme consists of four different classes studying for FETAC accreditation. Of the forty students on the programme, thirty responded to the questionnaire. The remaining ten students formed the focus groups, with five in each group. The focus group participants were representative of the entire student cohort. These participants as well as the questionnaire respondents, were all chosen randomly.

3.5 Research Instruments

A variety of tools were used to answer the research questions. These included questionnaires, interviews (with FETAC Level 3 Food and Nutrition teachers and the Literacy Coordinator), observation and focus groups with a number of students.

3.5.1 Student Questionnaire

3.5.1.1 Questionnaire design

Through discussions with the local Youth Council, information was gathered concerning the design of the questionnaire for students. This Youth Council, who carry out numerous surveys with young people, suggested that students do not like questionnaires with more than five questions and prefer questions that require tick box answers. Denscombe (2007) stresses that there is no greater deterrent to answering a questionnaire than its sheer size.

Taking this into consideration, the questionnaire (Appendix B) included ten questions and was designed to obtain data to provide answers to the first research question. Six of the questions included tick options, to facilitate learners that may have literacy difficulties. The remaining questions were open ended and sought to obtain rich and insightful data. These open questions were read to respondents, again facilitating those with literacy difficulties.

The questionnaire is structured to collect both quantitative and qualitative data. Yes and No responses lead the respondent to give a definite answer and do not prompt them to give a particular kind of answer. As literacy levels among some of the students can be poor, this type of question is very suitable. Six close ended questions were used in the questionnaire. These questions can be answered quickly and the author hoped that this would facilitate a high response rate. Some open ended questions were also used, with the aim of adding richness and depth to the findings. These questions allowed the respondent to elaborate on any point and can "catch the authenticity, richness, depth of response, honesty and candour" which are the "hallmarks of qualitative data" (Cohen *et al* 2000, p.255). The language used within the questionnaire was precise, easy to understand and unambiguous.

3.5.1.2 Scope of the questionnaire

The questionnaire is designed to initially collect information about the student's attitude to food and nutrition. It then progresses into the area of ICT. This section covers issues such as the student's preferred learning styles and how they perceive ICT. The author acknowledges that the questionnaire includes questions about both facts and opinions. The author is clear about the information being sought and if it relates to fact or opinion.

3.5.1.3 Validity of the questionnaire

Once the questionnaire was developed, a pilot study was carried out to eliminate errors, rectify omissions and make improvements in design and layout. Mertens (1998) regards research as insignificant unless it is valid. The first step in ensuring the validity of the questionnaire was to pilot it before use. Five questionnaires were completed by students who were not taking part in the survey. DeVaus (1993, p.103) emphasise that "pretesting should be done on people who will resemble the types of people to whom the questionnaire will finally be given". Evaluation of the pilot was discussed through a question and answer session with students from another class.

The purpose of this evaluation was to gather information on the layout and content of the questionnaire. Areas for improvement were explored with the group and the questionnaire was amended to reflect the feedback from this session.

3.5.1.4 Administration of the questionnaire

The final questionnaire was distributed to students on Monday 8th March 2010. Thirty questionnaires were distributed to students on the Youthreach programme. Questionnaires did not need to be posted out. As the Coordinator of the Youthreach programme, the author was able to oversee the distribution, completion and return of the questionnaires.

3.5.2 Focus groups / Observations

3.5.2.1 Reasons for selecting the Focus Group

As previously mentioned, the author was conscious that there may be poor literacy levels amongst some students being surveyed and as it was important to obtain qualitative data, the author felt that it would be appropriate to meet with two student groups to explore the issues in more detail. Greenbaum (1998, p.143) asserts that "One of the most important advantages that focus groups have over other research techniques are the benefits obtained from people's interactions in groups"

Denscombe (2007) believes that there are three distinctive and important points that focus groups have. These include:

- There is a focus to the session. The group discussion is based on an item or experience which all the participants have similar knowledge of.
- Emphasis is placed on the interaction within the group as a means of extracting information.
- The moderator facilitates group interaction.

The aims of the focus group in this study were to discuss and explore the following:

- The students' general attitudes towards ICT.
- Their current use of ICT within Food and Nutrition.
- Whether they thought they would benefit from greater use of ICT within the subject area.
- If they felt the use of ICT would enhance the learning process for students with literacy difficulties.

3.5.2.2 Focus Group Procedures

The author followed the four basic steps advocated by Morgan (2006), which include planning, recruiting, moderating, analysing and reporting. There are 40 students on the Youthreach programme and both focus groups consisted of five students. The remaining thirty students completed the questionnaire. None of the focus group participants were involved in the questionnaire element of the research. Considerable time was spent in formulating the questions. It was decided that the session would take place during the groups' timetabled Food and Nutrition class and that the Food and Nutrition teacher would not be present for this part of the class. The author was responsible for creating a comfortable atmosphere for the discussion taking place and for introducing the topic.

The author explained to each group what the session was about and how their participation was important. A set of ground rules was established with each group, to ensure that there were no interruptions and to assist in the smooth running of the group. It was also hoped that this would reassure each student that their contribution would be listened to, heard and valued. The author was responsible for keeping the discussion focused around the topic and encouraging participation from all members. As the author has significant experience working with such groups, no one person was allowed to dominate the discussion and when this took place the author steered the focus back to the group discussion. The author kept field notes relating to the discussion. The duration of the focus groups was approximately one hour each.

The author had previously designed a piece of software for the FETAC Level 3 Food and Nutrition module. This resource was used during a class and feedback gathered about the advantages and disadvantages of using the resource, as a learning tool during class. This helped to stimulate discussion within the group. Observation studies were conducted with both focus groups. This was carried out during their communication class and centred on the theme of ICT and what it means to them. Visual aids and collages were created by the learners during this class to help them gain a clearer understanding of ICT/computers (Appendix E).

3.5.3 Teacher/Literacy Coordinator Interviews

3.5.3.1 Reasons for selecting Interviews

As part of this research the author carried out interviews in order to establish the role of the FETAC Food and Nutrition teachers (Appendices F and G), in promoting healthy eating practices amongst Youthreach students and the role that ICT played in their teaching. The author wished to explore and gather information as to why ICT was used or not used in their teaching. The literacy coordinator (Appendix H) would reveal the role that ICT/computers can play in the promotion of literacy within the programme and how it can, or if it can, assist students with literacy difficulties.

Denscombe (2007) states that interviews involve a set of assumptions and understandings about the situation, which are normally associated with a casual conversation. These include

- There is consent by the interviewee to participate in the interview
- The interviewee's words can be treated as on the record
- The agenda for discussion is set by the interviewer

A skilled interviewer can probe responses and examine motives and feelings in ways which questionnaires can not do (Bell 2005).

3.5.3.2 Interview Procedures

A guided and focussed interview style was used, as it allowed a degree of flexibility during the interview. "No questionnaire or checklist is used, but a framework is established by selecting topics on which the interview is guided" (Bell 2005, p.161). The interviewer had a clear list of issues and questions to be discussed and this format also allowed the FETAC Food and Nutrition teacher and literacy coordinator to elaborate freely on any issue. The format also allowed for flexibility during the interviews. Topics could be discussed and returned to later if the interviewee so desired. Ideas could be expanded upon and the interviewee could speak more freely on topics that the interviewer wanted to focus upon. All interviews were conducted in person and on a one to one basis. There are many advantages to this, including ease of arrangement, ease of control and with only one voice to distinguish, it was easy to transcribe from tape. The initial questions offered an opportunity for the interviewee to become comfortable. Each interview lasted fifteen to twenty minutes and the author kept a discreet eye on time throughout. The author used audio recordings backed up by field notes.

3.6 Data Analysis methods

Denscombe (2007) believes that there are fives stages in the analysis of research data. These include

- Data preparation
- Initial exploration of the data
- Analysis of the data
- Representation and display of that data
- Validation of the data

Data from the questionnaires were entered into Microsoft Excel for analysis. It was categorised and catalogued. The data gathered from the interviews was transcribed and analysed, by the author's reading and summarising of the main points arising

during the interviews. Trends or correlations were looked for and were grouped together in order to quantify the collected data. Statistics were used to provide a picture and this was linked to the research questions. Tables were used to represent that data and interpretations of the findings were written up. Comparisons and triangulation were examined. Triangulation is the technique of viewing things from more than one perspective (Denscombe 2007). The principle behind this is that the researcher can get a better understanding of the issue that is being studied if they view it from different perspectives (Denscombe 2007).

3.6.1 Timeline of research schedule

Week beginning 8/2/10	Pilot Questionnaire
Week beginning 22/2/10	Observation Class
Week beginning 8/3/10	Focus group 1 session
Week beginning 22/3/10	Interview A
Week beginning 22/3/10	Interview B
Week beginning 22/3/10	Focus group 2 session
Week beginning 29/3/10	Administer Questionnaires
Week beginning 29/3/10	Interview C

3.7 Research strengths and limitations

3.7.1 Validity and reliability of research

Reliability is the extent to which a test or procedure produces similar results under constant conditions on all occasions and validity tells us whether an item or instrument, measures or describes what it is supposed to measure or describe (Bell 2005). The variety of research methods used within this study enhance the validity and reliability of the research.

3.7.2 Limitations

A difficulty with this kind of research is that each case is unique and the findings may not be generalisable to other situations. However, the aim of using a case study approach is to identify and explore the diversity that can exist within cases (Hayes 2000). The case, although unique, will be part of a broader category and is likely to demonstrate similar features. Significant features may be identified within the group and the ways in which the case in question compares to others in the group may be made visible (Denscombe 1997).

There is danger of bias creeping into focus groups and interviews as "interviewers are human beings and not machines" (Selltiz *et al* 1962, p.583). The main drawback encountered was that the interviewees and focus group members knew the author who was also the coordinator of the Youthreach programme. Research on interviewing, has indicated that people respond differently depending on how they perceive the person asking the questions (Denscombe 2007). The author, as coordinator of the Youthreach programme, could also have had a bearing on the focus groups, with students being conscious of the fact that it was the coordinator conducting the focus group and as a result they may be more aware of the responses that they gave.

The number of interviews and focus groups that were conducted by the author were limited to what was available within the research setting. There are only two FETAC Level 3 Food and Nutrition teachers and one literacy coordinator and therefore that is what this study was confined to. The findings are limited to the Youthreach setting and environment where the study was carried out and will therefore have limitations in their application.

3.7.3 Ethics

Blaxter *et al* (2001, p.158) argue that

> "Research ethics is about being clear about the nature of the agreement you have entered into with your research subjects or contacts. Ethical research involves getting the informed consent of those you are going to interview, question, observe or take materials from. It involves reaching agreement about the uses of this data, and how its analysis will be reported and disseminated. And it is about keeping to such agreements when they have been reached".

Permission was initially sought from management to carry out the research (Appendix A). Confidentiality and the purpose of the study were highlighted to all participants. Staff and students were also given the option of not taking part in the study if they so desired, without any repercussions.

3.7.4 Problems encountered

The author was conscious that literacy levels amongst some of the respondents may be weak. Therefore, it was decided to use closed ended questions as much as possible, to ensure that students would have as little difficulty as possible in completing this part of the research. The author also decided to personally conduct the survey. The process was initially explained to the students and then each question was read out to the group. Although the author was present in the room when the questionnaires were completed, they were completed anonymously.

Chapter 4 Findings

4.1 Introduction

This chapter reports on the findings from the case study. These were obtained through the use of student questionnaires (Appendix B), focus groups and observation with the students (Appendices C, D and E), semi-structured interviews with the FETAC Level 3 Food and Nutrition Instructors (Appendices F and G) and the Literacy Coordinator (Appendix H). These methods were used as the most efficient means of obtaining information from the students and instructors. Findings are illustrated in graph, chart and text form. As previously mentioned, literacy issues are a concern amongst some students and this issue was taken into consideration at all times.

Thirty questionnaires were distributed by the author and thirty questionnaires were completed by the students and returned, giving a response rate of 100%. Two focus groups were held with students. An observation session was held with the focus groups, initially concentrating on the themes of ICT and what it means to them. Students had a discussion focusing on what this is and then made up visual posters of what it means to them (Appendix E). The author felt that it was important to create an environment where the students felt comfortable and confident about what they were talking about. All students involved in the research for this study participate in the Food and Nutrition class.

The findings of the research are set out below and are relative to each research question.

4.2 Findings by Research Questions

4.2.1 If Youthreach Students Learn More Effectively Using ICT/computers During Their FETAC Food and Nutrition Class

One hundred percent of students surveyed, felt that Food and Nutrition was an important life skill (Fig.4 1). The survey included males and females from the ages of 15 to 20 years and included students from the travelling community along with students from Poland and Indonesia.

Both FETAC teachers believed that Food and Nutrition was an important life skill. One interviewee believed that the knowledge gained through Food and Nutrition would help with the next generation as a lot of the students get married and have children very young.

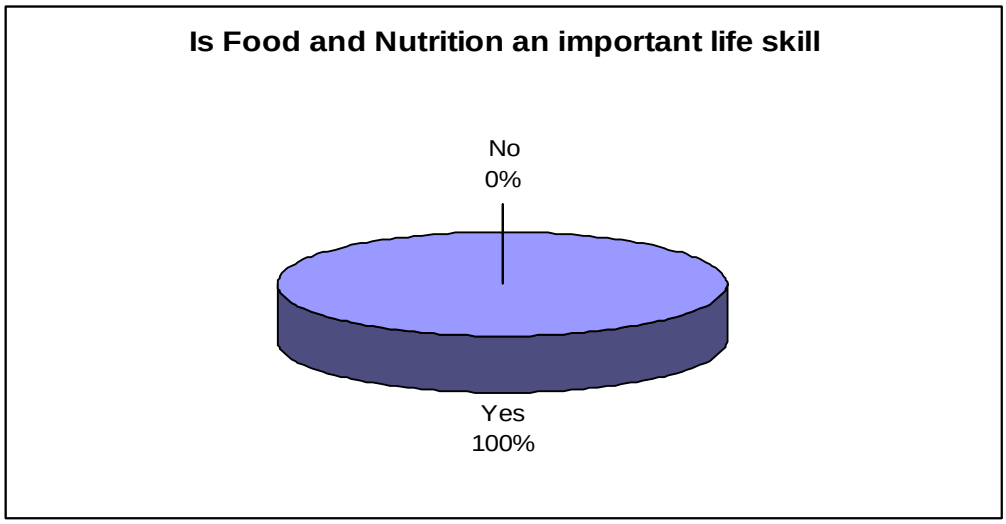

Fig 4.1: Is Food and Nutrition an important life skill

Almost three quarters of the respondents (74%) stated that they enjoyed/liked the subject while over one fifth (23%) stated that didn't enjoy/like the subject. One person did not answer this question (Fig. 4.2). Teacher B stated that while they may

be "*initially hesitant to get into the whole cookery, looking at nutrition. But they actually do enjoy the hands on aspect and cooking aspect of it. Confidence or lack of it plays a huge part of them getting involved*" (Appendix G).

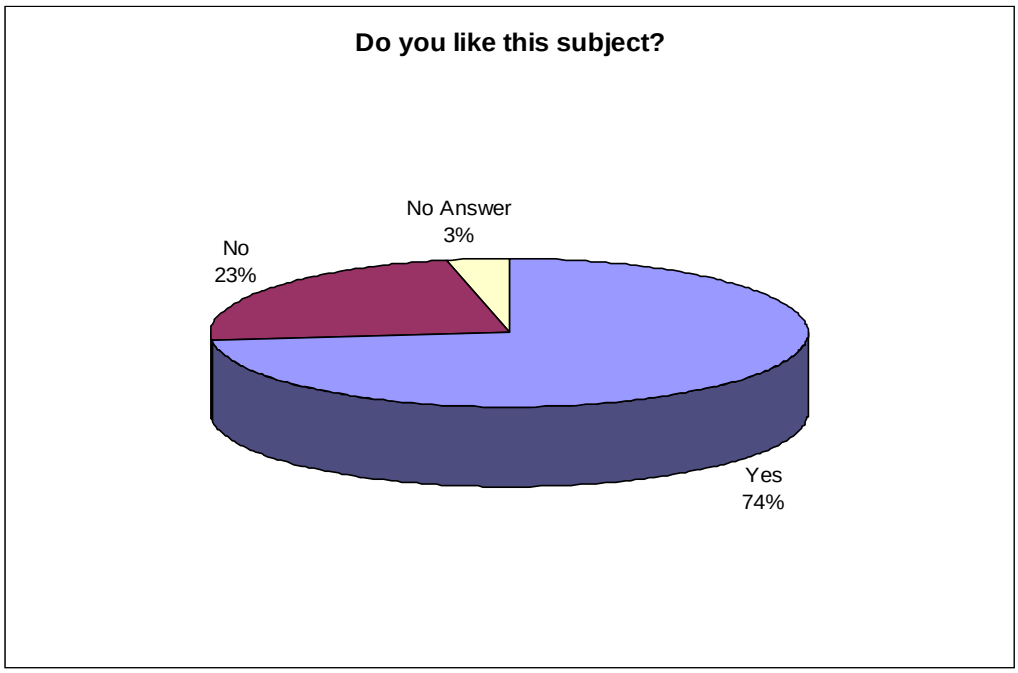

Fig 4.2: Do you like this subject

When asked what they enjoyed about Food and Nutrition, students gave a variety of answers. As can be seen from Figure 4.3, 41% said that they enjoyed the practical or cooking side of the subject while 38% said that they enjoyed eating the food that they had cooked. Eleven percent said that they liked learning about different foods. Five percent didn't enjoy anything about the subject and another 5% did not answer. Almost four fifths (79%) of those surveyed enjoyed the cooking and eating part of the subject (Fig. 4.3).

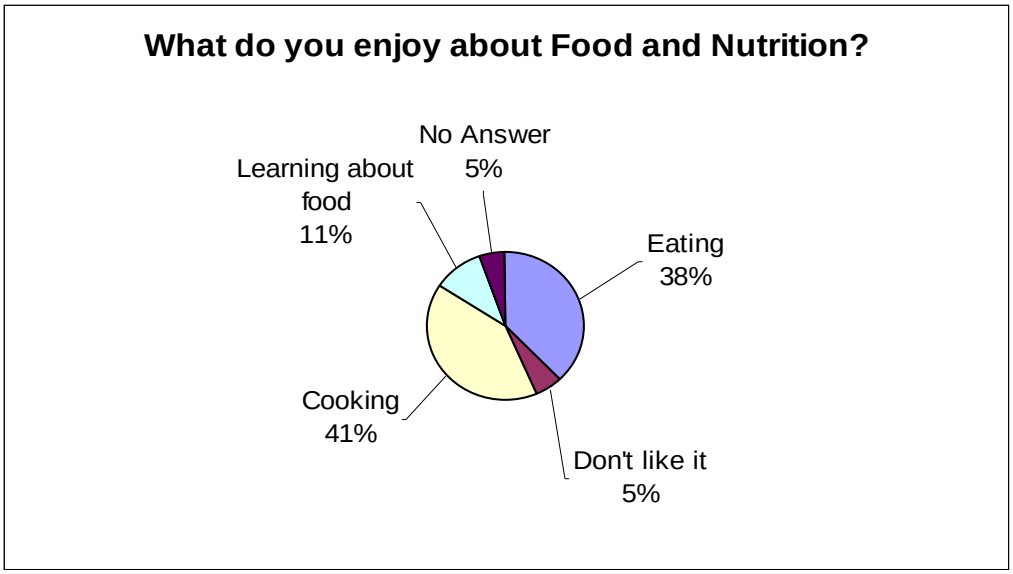

Fig 4.3: Reasons for enjoying Food and Nutrition

Students gave a variety of answers when asked what they did not enjoy about Food and Nutrition, (Fig. 4.4). Over half (55%), said that they did not like the theory/bookwork aspect of the subject. Twenty seven percent said that they did not like the cleaning up and 9% said that they disliked all aspects of the subject. Three percent said that they disliked nothing about the subject, the cooking part of the subject, while another 3% gave no answer (Fig. 4.4).

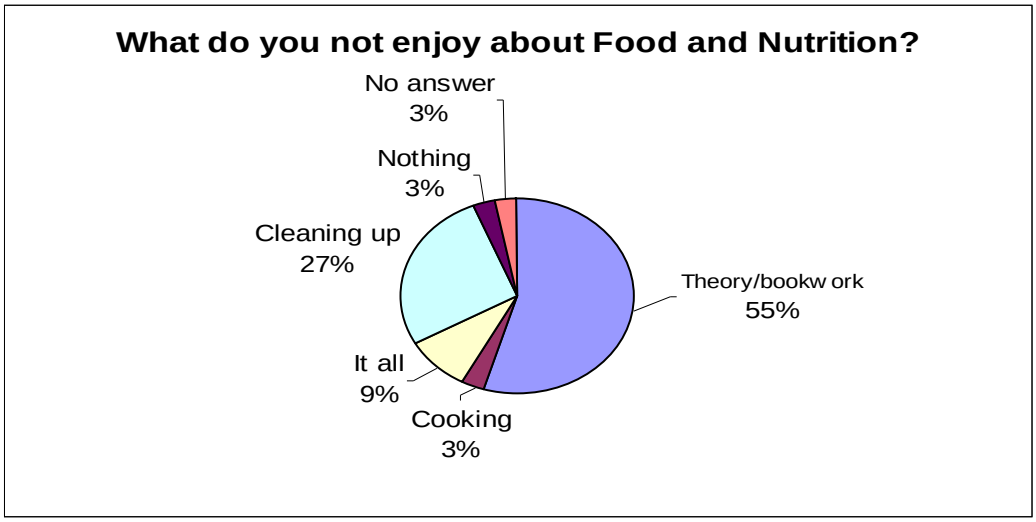

Fig 4.4: Reasons for not enjoying Food and Nutrition

When asked if they thought the use of ICT/computers would make this subject more interesting 90% of respondents replied that they felt it would (Fig. 4.5). Only 7% felt that it would not enhance the subject. Five percent did not respond to the question. Both focus groups indicated that the use of DVDs and the internet would make the subject more interesting. Focus group 2 acknowledged that although the "*practical stuff wouldn't be done on the computers but the stuff to do with typing for making a folder of it, you would use computers. It makes it more presentable*" (Appendix D).

Both focus groups thought that the use of the interactive white board was good and they were more motivated to learn. Students who had previous experience with the interactive white board stated that they thought it was "*brilliant*" and that they feel a lot "*more involved in the work*" as well as the class being less boring. Both groups felt that it was easier to learn when the teacher taught in this way (Appendices C and D).

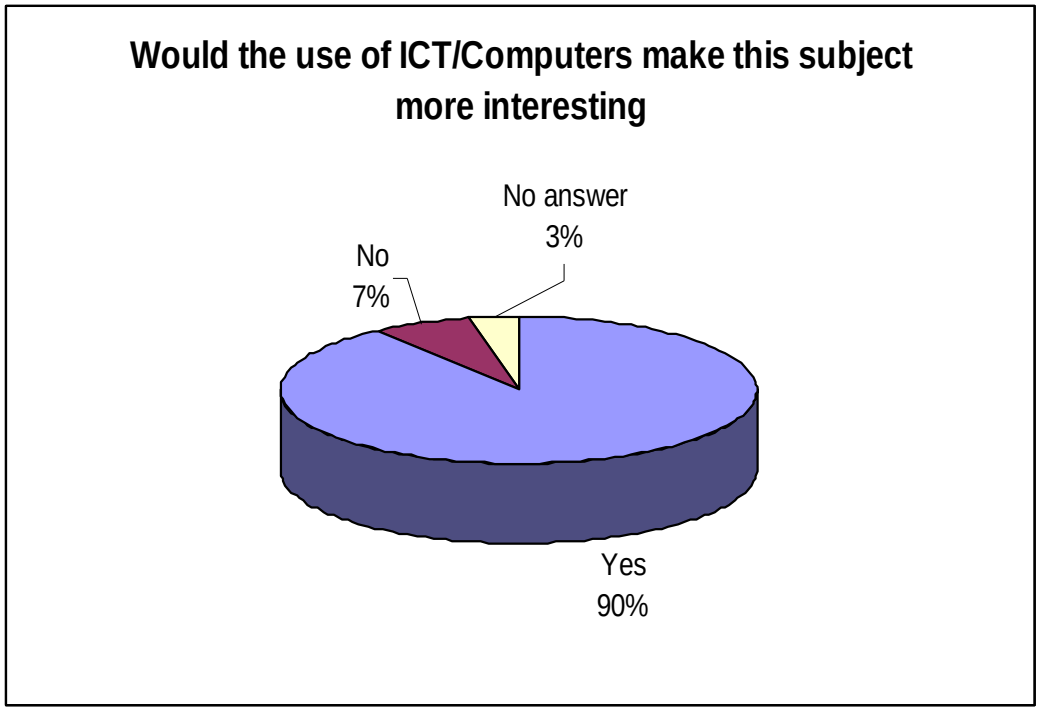

Fig 4.5: Would ICT/computers make this subject more interesting

Figure 4.6 below, shows that 80%, of respondents felt they would enjoy the subject better if ICT/computers were used more frequently. The remainder did not think that it would make any difference to them. Both focus groups indicated that they would much prefer to have a variety of teaching methodologies used within the classroom. The ability to use the internet as opposed to looking things up in books was voiced. Using YouTube, DVDs and the interactive white board were all given as examples of how the subject could be made more interesting. One person in focus group 1 stated that technology was "*more interesting, it's colourful, it's moving, it's easier to interact*" (Appendix C). Focus group 2 suggested presenting work using PowerPoint as a way of making the subject more interesting and felt that they would be more involved in the subject if PowerPoint was used (Appendix D). Students liked the fact that there are more pictures and the sound can be turned up and down. Focus group 2 said that they found it easier to watch DVDs during some subjects and for puzzles and maths games they enjoyed using the Nintendo DS (Appendix D).

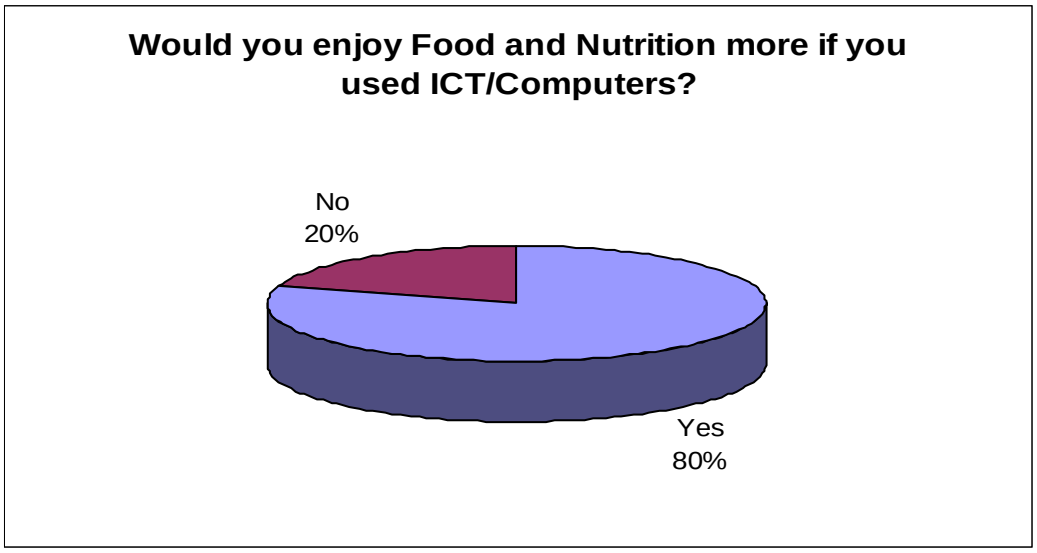

Fig 4.6: Would the subject be more enjoyable if ICT/computers were used

When students were asked what they enjoyed about ICT/computers a variety of answers were given. Figure 4.7 shows that 46% of students indicated that they enjoyed going on the internet, while 15% said that they enjoyed all aspects of ICT. Nine percent said that they enjoyed using ICT/computers because it was faster and

easier to use. Fifteen percent responded that they liked nothing about ICT/computers while another 9% did not respond. Three percent enjoyed both typing and games (Fig 4.7).

Responses from both focus groups therefore reinforce the notion that the learning process is greatly enhanced through the use of ICT. The ability of ICT to make learning easier was voiced by a number of respondents. Figure 4.7 below shows that questionnaire respondents are in agreement with and endorse these views.

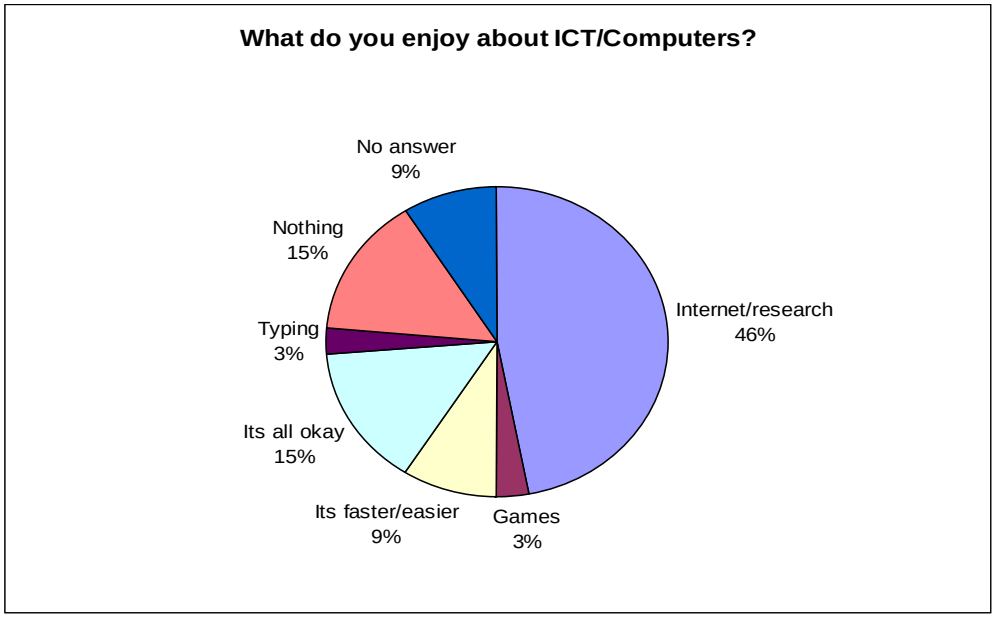

Fig 4.7: Reasons for enjoying ICT/Computers?

The capacity of ICT to help organise and store student work was highlighted by focus group 2 as an advantage "*it's easier to organise, everything's all in the one place. You don't have to go and find stuff in different places. When you save stuff it's all in the one folder*" (Appendix D).

The potential of the internet in improving learning was identified by both focus groups. Forty six per cent of students identified the internet as a reason for enjoying ICT (Fig. 4.7). Similarly, both focus groups revealed that they enjoy using it and found looking things up on the internet much more enjoyable and easier than using

books. Focus group 2 said that they liked "*looking up stuff – say if you're looking up a word on the computer or Wikipedia, it's quicker than using a dictionary*" (Appendix D). Social networking sites such as BEBO were used regularly by the majority in both focus groups.

When students were asked what they did not enjoy about ICT students again gave a variety of answers (Fig 4.8). Thirty five percent did not reply to this question while another 10% indicated that they disliked nothing about ICT/computers. Another 10% replied that they did not like when technology broke down. Three percent indicated that they found it boring and another 3% stated that they disliked not being allowed on the internet (Fig 4.8).

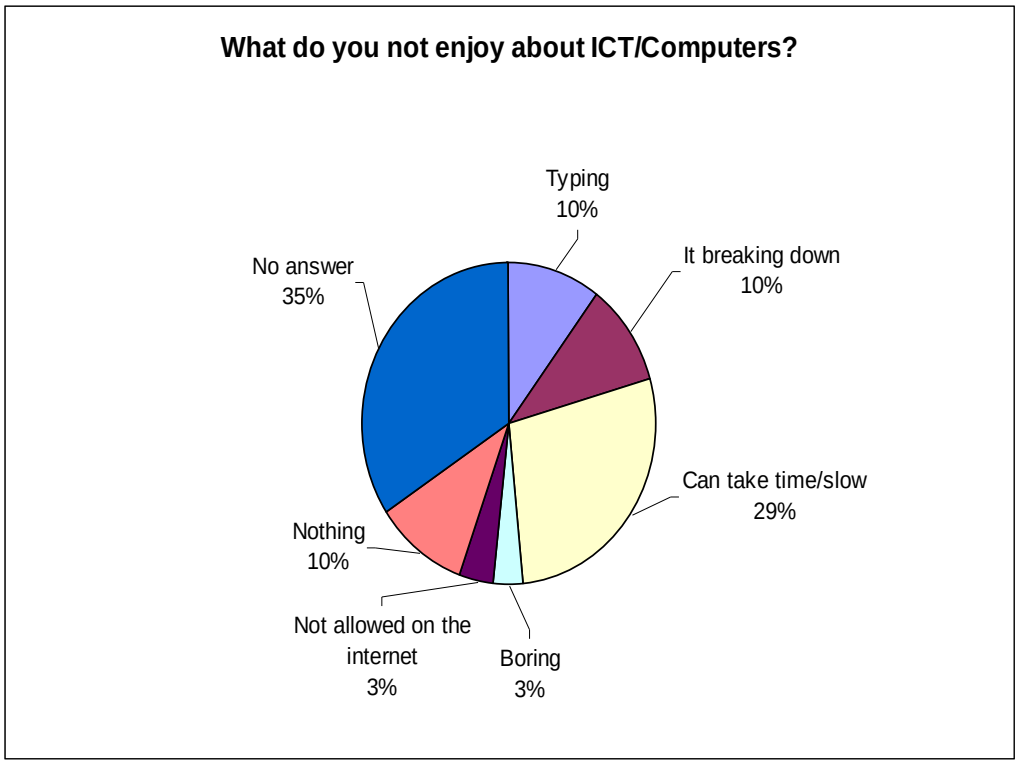

Fig 4.8: Reasons for not liking ICT/Computers

Responses from both the questionnaires and the focus groups indicate that students are also quite informed and aware that ICT can have disadvantages. Focus group 2 said that when computers or technology doesn't work it can be very annoying and

sometimes computers can be slow which they found to be very frustrating (Appendix D). There was also an awareness in the focus groups that computers can and indeed do break down. The focus groups expanded further on the disadvantages of ICT in identifying that it can be more expensive than traditional teaching methodologies and can be prone to viruses. Focus group 1 was aware that ICT may not suit or help everyone to learn stating that some people "*just don't understand how to work computers*" and "*if you don't know how to use them they can be really annoying"* (Appendix C).

As can be seen from Figure 4.9, when students were asked if they felt that they would learn better using ICT/computers, 87% felt that they would learn better, while the remainder felt that the use of ICT/computers would not aid their learning. The feedback from both focus groups also gives a strong indication that students prefer to learn with ICT. Focus group 1 indicated that because young people have grown up using computers and technology, they are used to it and are more familiar with it than older people who "*never had it in their day*" (Appendix C). Both focus groups also believed that it was "*easier to type than doing writing*" as some students have writing and spelling difficulties (Appendices C and D).

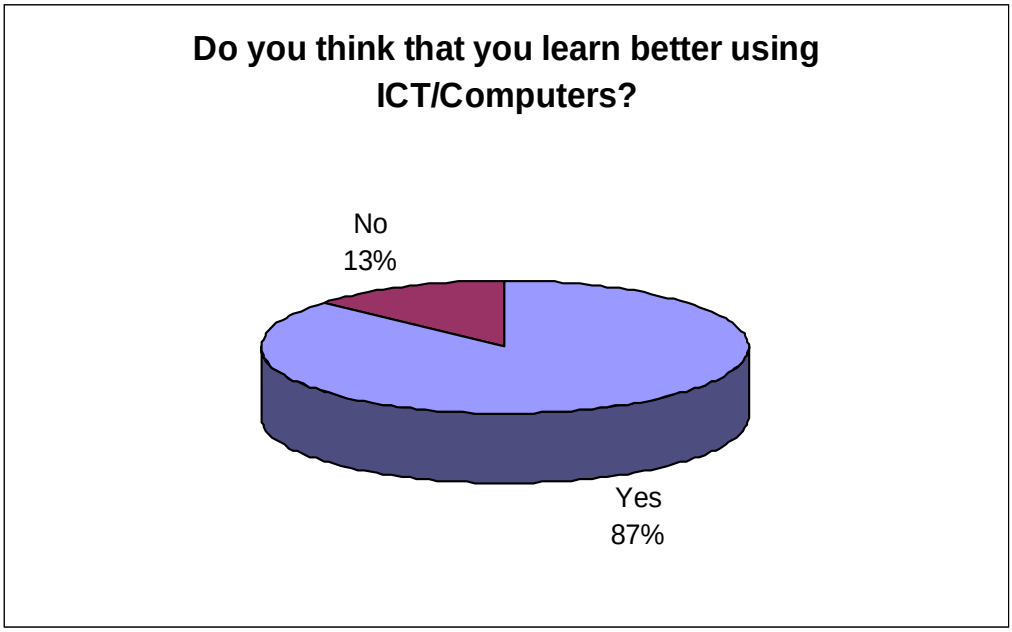

Fig 4.9: Ability to learn better using ICT/Computers

4.2.2 The Level of ICT Usage by FETAC Food and Nutrition Teachers.

When students were asked if they used ICT/computers in the Food and Nutrition class 80% replied that they did not, while the remainder indicated that they did (Fig. 4.10). Both teachers indicated that they made some use of ICT, both in their day to day teaching of Level 3 Food and Nutrition and in planning and preparation for their teaching. Uses included compiling worksheets, creating games, showing DVDs, using the internet to research recipes and video demonstrations on cooking. The digital projectors as well as the interactive white board are also used by the instructors when in the classroom situation. One teacher felt that the use of the interactive white board "*lightened the whole theory side*" as it makes it very hands on for the student as there are numerous exercises around nutrition, the food pyramid and matching words with pictures.

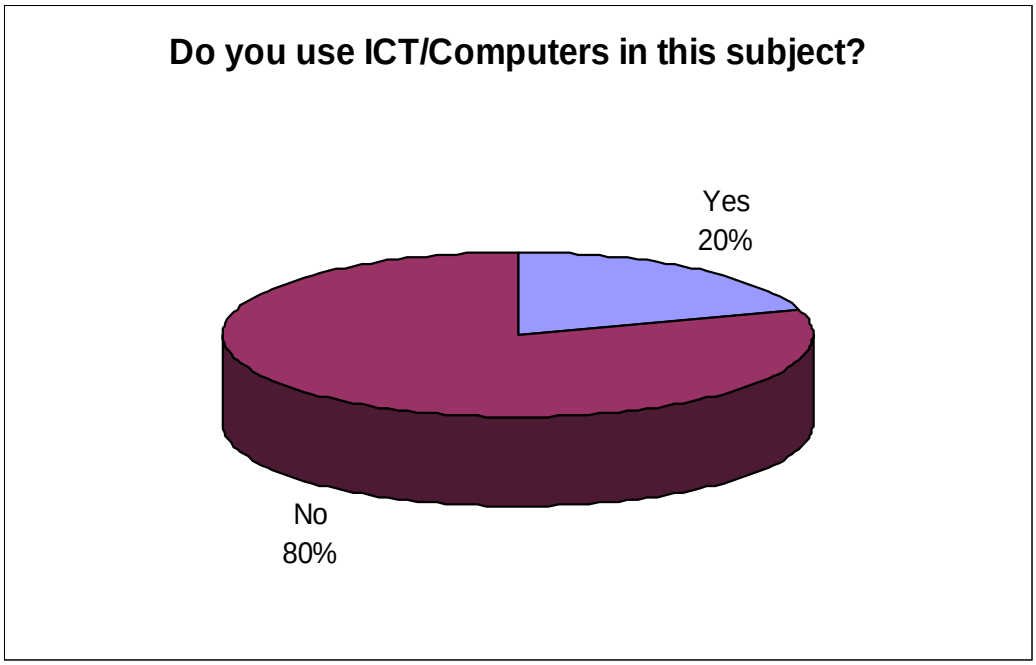

Fig 4.10: Use of ICT/computers in Food and Nutrition

4.2.3 The attitudes that Food and Nutrition teachers have towards the potential benefits of ICT use in their subject area.

Both FETAC Food & Nutrition teachers' attitudes were positive towards ICT within their subject area. One teacher has a computer and printer in the classroom where they teach, while the other does not. This resource deficiency is an inconvenience for the teacher, as they get the students to produce cover sheets and materials for their FETAC portfolio on a regular basis. When asked if they use ICT within their subject both replied that they did. Uses included preparing material for classroom work, internet research, photocopier, digital camera, watching DVDs and using the interactive white board.

The literacy coordinator is also a teacher on the Youthreach programme. She teaches basic literacy and communications to various groups. She felt that the use of ICT within all subject areas was very important. She felt that the internet was a great resource for both staff and students. "*You can go into the internet and there's a variety of information there for your students, again at different levels, there's all kinds of exercises that you can print out as well. There's a huge amount in information on the internet that they can access*" (Appendix H).

4.2.4 The role that ICT/computers can play in literacy development and literacy integration across the Youthreach programme

The literacy coordinator's role within the programme is to profile the reading, spelling and mathematical age of the learners when they enter the programme. Reading ages can be around eight years and "*spelling would be weak with an awful lot of students*". They felt that "*there's none that doesn't need help with their reading – very few of them actually. They wouldn't be where they should be at with their reading and their spelling*" (Appendix H).

The Newell Literacy Programme has been loaded on to every computer in the centre and this programme contains a vast array of information and exercises ranging from grammar, phonics, reading etc. The literacy coordinator felt that this was great as it provided opportunities for staff and learners to take advantage of and if there was a timetabled staff member absent, the students could use that period to explore the software.

Teacher A stated that because reading ages can be as low as 8 years, this can present huge difficulties in reading even simple recipes. "*They find that very difficult because there would be words in that, that they don't recognise. So it's really down to a literacy difficulty and the understanding that comes from that*" (Appendix F). They went on to state that "*there's a lot of challenges there trying to get that written work across to the young people, and recognising the key words, and you know, being able to use them in their everyday lives as well*" (Appendix F). Different abilities and levels were found in all classes. These finding were supported by the literacy coordinator. She felt that the software provided, could assist staff in this area. They also created their own booklets and worksheets to suit the various levels and ability within their class.

Both focus groups felt that ICT/computers would help students with literacy difficulties especially when writing. Focus group 2 felt that "*it builds your confidence*" and "*if you get the wrong word it tells you on the computer*" (Appendix D). They also felt that tools, such as spell-check, helped with word processing because if a mistake was made the whole thing didn't have to be rewritten. One foreign national learner in the focus group used an electronic dictionary. He felt that "*it makes it easier to research something that I want*" as well as translating information for him.

One teacher thought that ICT was great and "*it's really opened up the whole subject to the young people*" "*Because not only can you make your worksheets, you can adapt them literacy wise and add pictures and different things*". Through ICT, the

other teacher composed "*a word bingo*" game containing all the words used in cookery.

4.3 Summary

The findings from this study indicate that young people learn more effectively and prefer to learn and be taught using digital media and technology as opposed to more traditional methods of teaching.

The majority of comments made by the students were positive in relation to the use of technology. Technology is seen as a beneficial tool in the learning process and could enhance the learning environment for the majority of students. Students felt that there wasn't enough of it being used within the classroom setting and they would prefer to see the teacher use more whilst teaching within the classroom.

This type of methodology influences the student's thinking and education of Food and Nutrition. It could make them more receptive to the learning environment and could lead to a reduction in behavioural issues, particularly when interactive digital teaching methodologies are involved.

The FETAC Food and Nutrition teachers in this study showed positive opinions and attitudes to the use of ICT within their subject area. All were positive in relation to the use of ICT within their subject area and do so within the time and resource constraints that they are working with.

Both teachers also acknowledged factors that restrict and support their use of ICT within their subject area and identified areas such as time management and more training, either within a formal capacity or an informal capacity amongst staff themselves.

Both teachers and students appear to be aware of the benefits that ICT/computers can offer within the educational environment. To gain full advantage of the resource, classes need organisation, resources and planning to implement this successfully.

One issue that was encountered by a teacher was that when working in the computer room all the student work was saved on a server system and therefore other students could have access to this and that the teacher has had cases where student work has been sabotaged and destroyed. This caused a lot of conflict within the class and has caused teacher A to become more reluctant when using the computer room suites.

The findings from the study also indicate that the use of ICT/computers would be beneficial for students who experience literacy difficulties. The literacy coordinator advocated its use across the programme and stressed that the software that is being used on the programme is valuable for the students. Staff and students need to be encouraged to use the resources that are currently available to them, to maximise the benefits that this can have.

The next chapter Discussion, will analyse these findings in the context of the previous literature review.

Chapter 5 Discussion

5.1 Introduction

This chapter discusses the findings in the context of both the literature review in Chapter 2 and the findings from Chapter 4. This chapter will be presented with reference to the research questions.

5.2 Discussion of findings by research question

5.2.1 If Youthreach Students Learn More Effectively Using ICT/computers During Their FETAC Food and Nutrition Class

For some time the core element of teaching has remained the same. This is to increase human performance and learning. The only thing that has changed within the educational sector, are the variety of tools that are used to assist this process. Multimedia can be seen as a very powerful tool for learning. Learning can be supported by technology and assisted by a teacher.

Many students enjoy using technology and digital media within the classroom although several still enjoy traditional classroom instruction. Both focus groups stated that they enjoy using technology during class and that they find it much more interesting and engaging than a teacher "*standing at the top of the class reading out from the book and that's just what teachers did in schools and here was meant to be different*" (Appendix C). This was reinforced by the responses from the questionnaire. Ninety percent of students felt that Food and Nutrition would be a more interesting subject if ICT/computers were used (Fig. 4.5). Alongside this, 87% felt that they would learn more effectively if ICT/computers were used (Fig. 4.9) in

this subject and 80% of the respondents also indicated that they would find the subject more enjoyable if ICT/computers were used (Fig. 4.6). These are all significant percentages and considering that three quarters of the total student population in the centre were surveyed, the results do indicate a strong desire for the use of digital technology amongst the students. The use of ICT can provide opportunities for students to enhance their learning environment and experience and encourage more involvement from them (Park and Bonk 2007). As teacher A stressed it is important not to lose sight of the fact that Food and Nutrition is a practical subject and therefore needs a hands on approach. However, the incorporation of various ICT methods within the classroom should be looked at. As focus group 2 mentioned, allowing the students to create PowerPoint presentations of the work that they do in class, is one option that could be looked at. Management have a responsibility to look at these issues and see how they can be incorporated into the teaching environment.

5.2.1.1 Enhancing the Learning Experience

ICT can provide students with greater opportunities to encounter success with learning and thereby help cultivate a positive approach towards the school curriculum and learning (NCCA 2004). One of the most powerful tools for students is visual contact with the teacher (Ledbury *et al* 2004). This, combined with the technology that is available, should provide a powerful learning experience and environment for the majority of students. As teacher A stated, they may have to repeat a recipe numerous times before a student begins to understand it. The use of DVDs in this instance is very practical for both the student and the teacher. Teacher A said that "*in some cases, reading a recipe means nothing to them. When they actually see it being done right, it relates more to them, they relate more to it. They understand it*" (Appendix F). The student can watch the DVD as many times as they need and can call on the teacher for assistance if they do not understand something as well as being able to pause, rewind or fast forward as they need. The teacher can continue with the class without leaving the student behind and can check their progress at regular

periods. This allows the teacher to incorporate differentiation within the classroom and to use different teaching methods.

Becker and Ravitz (1999) reinforce this by emphasising that teachers should develop methods that allow for differentiation. This was also supported by focus group 2, as they felt that being able to work on individual tasks allowed them to work at their own pace and learn more, because each person is working and collecting information from different sources. The students felt that they learnt from each other in this way and it was much more productive.

5.2.1.2 Learner Centred Learning Environments

The learning environment should be designed to challenge and support student thinking, be it via technology or through traditional methods. Active teacher and student involvement, alongside good preventive management, can lead to success within the classroom. Active teacher and student involvement are the foundations of an effective learning environment (NCCA 2004). This environment is an essential part of the ethos of the Youthreach programme. Classrooms can display an assortment of learning styles such as visual, auditory and kinaesthetic.

The Department of Education and Science (2004) found that visual, auditory and kinaesthetic forms of ICT involve students to a large extent. Both focus groups agreed that having ICT/computers was a good thing within the classroom situation. Focus group 1 suggested having a variety of teaching methods within the class. One student from that focus group stated *"We know that we can't watch DVD's or go on the internet for every class but every now and again it would be good. Say if the teacher showed something for 15mins and then we talked about it for a wee while and then did some work sheets that would be good. Every class it's worksheets, worksheets, worksheets and if you're not good at writing it takes you ages and that*

makes you feel stupid" (Appendix C). This flexible approach is supported by the Department of Education and Science (2004) who place importance on trying to meet individual needs at a local level rather then focusing on the specific programmes.

The ethos within the Youthreach programme also asserts that emphasis should be placed on active and engaging learning approaches, where students are encouraged to take ownership of their learning. Consistent with traditional teaching, students will get out of a learning community what they put into it. Some will participate more than others, irrespective of what methodology is used and it is the role of the Youthreach teacher to try to offer learning activities that will appeal to the widest variety of learning styles. Dawes (2001) highlights that teachers need to create an environment and activities that foster the potential of the students through the use of ICT. As the questionnaire findings show, the majority of students indicated that the use of technology would assist them during class. Both focus groups indicated that using ICT/computers in class was more beneficial for students and did not lead to inappropriate behaviour. They felt that "*It's more productive, because if you have one person at a computer, you're not all sitting round it – you're doing your own work on the computer*" and "*You focus better*" (Appendix D)

Both focus groups expressed their enthusiasm for the interactive white board. When focus group 1 was asked if it caused disruption within the class the answer was no. Students engaged with the student who was up at the board and helped them if they were in difficulty. Classroom based ICT facilities allow students to work independently, in pairs or in groups. Positive peer interaction and peer teaching can take place during these sessions (NCTE 2002). Interactive technologies promote environments that encourage the student to become involved in learning. Interacting with others allows for variety in learning and increases openness to new ideas and concepts. Learning environments are basically an essential part of the communications system in education.

Using technology during teaching requires a lot of planning and structuring to successfully engage students (Vrasidas and McIsaac 2000). Teacher A found that cookery was very time consuming and "*you need a fair few classes to cook something, even the simplest thing, some people they might need three classes*" (Appendix F). This teacher found watching DVDs an excellent resource to help with this as well as the literacy difficulties that are experienced by some students. They stated "*Because in some cases, reading a recipe means nothing to them, right, okay? When they actually see it being done right? It relates more to them they relate more to it. They understand it. They have to see, and not once maybe it might take three times and the DVD is great for that!*" (Appendix F).

Focus group 1 indicated that they didn't think that older people know how to work technology and that "*younger people, because we're up to date*" find it easier to use technology because the older people "*never had it in their days*" (Appendix C) and the group felt that some teachers who used technology were only learning as they went along. Focus group 2 agreed with this perception, although they acknowledged that the majority of teachers did know how to use technology but not as well as the students themselves did. Peterson (1999) cites this as one reason why teachers may be reluctant to use technology within the classroom.

Cultural issues have a huge impact on education as a system but also on learning at an individual level also. Currently nearly 40% of all students on the Youthreach programme come from a traveller background and within that, almost two thirds are male. Cooking and domestic duties are very much seen as "women's work" amongst a lot of the young males, especially male travellers on the programme and this can contribute to difficulties within the classroom.

5.2.1.3 Engaging the Learner

Eighty seven percent of students felt that they learn better using ICT/computers and nearly half (46%) enjoyed using the internet (Fig. 4.7). Both focus groups stated that

they enjoyed using technology during classes and that "*It's interesting, there's history channels, geography channels, nature channels, stuff like that*". Focus group 1 acknowledged that "*if they ask you to research something you can look it up on the internet. It's easier to do that than it is to look in a book*" (Appendix C). ICT can provide students with greater opportunities to encounter success with learning and thereby help cultivate a positive approach towards the school curriculum and learning (NCCA 2004). Both focus groups also felt that it was easier to learn from technology and they find that they learn easier and quicker from it and that this is more interesting. This supports the findings from the questionnaires. When asked if they felt that they would learn better using ICT/computers, 87% felt that they would (Fig.4.9). This concurs with Panagiotakopoulos and Ioannidis (2001) and Frear and Hirschbuhl (1999) who believe that many students can prosper from the use of a variety of software. Some teachers and students may also feel that without technology the classroom is out of touch with its students and is unable to adequately prepare them for their future.

5.2.2 The level of ICT Usage by FETAC Food and Nutrition Teachers.

Both of the teachers interviewed used ICT within the subject area but it was predominantly for classroom preparation. When asked what would help them to incorporate more ICT within their subject area, training, resources and time management were key areas mentioned. A number of authors assert that time, professional development and access were some of the factors that prevented teachers from incorporating ICT into their work (Ertmer 1999, 2005; Hew and Brush 2007). The literacy coordinator also stressed that training was essential, especially for specific hardware, such as the interactive white board. This is supported by Bradshaw (2002), who found that for many teachers, building on their skills is a priority. The literacy coordinator also felt that the interactive white board should be in a different classroom as they personally feel that they cannot access it when they want.

Although both teachers had received ICT training, teacher B said "*We've had limited training. "There is limited training available particularly on the interactive whiteboard but we have a very supportive staff. So more training would be great, even if it's an informal training in amongst the staff themselves. More time for training would be great*" (Appendix G).

The sense of sharing and community amongst staff was evident and staff got encouragement and support from this. Teacher B felt that they were working with a very supportive staff and "*ones who know something about it are very good about sharing it with others. And I feel that's important because if you see what somebody else can do well then it inspires you to go on ahead*" (Appendix G). Teacher A supported this by saying that although lack of resources are a problem they are never refused use of the computer room even though there may be another class in there. Staff accommodating each other like this all adds to the sense of sharing and community and encourages team building amongst each other. Team teaching, which was once strongly advocated here in Ireland, has in recent years diminished in popularity (Helms *et al* 2005). However, it remains as an accepted and widespread pedagogy in the Youthreach sector.

Resources or lack of resources was cited as one reason why the use of ICT was limited within classrooms. Only one computer was available in teacher A's classroom. However, they did state that they could use the computer room although there may be another class using it at the same time. Teacher B stated that "*You could have something ready on your laptop or whatever prepared and then you might be put into a classroom that doesn't have ICT so it's wasted you know. So obviously the resources and the training and everything would go hand in hand*" (Appendix G).

Both teachers mentioned that if there was a digital projector in every class it would be beneficial. This would allow the teachers to take photographs of the students while doing their cookery class and they then could be shown and "*it reminds them afterwards when you're talking to them what exactly they were doing. Because*

obviously everybody can forget. So if you have photographs of them, say mixing, you know, beating and doing different things then that can bring up the whole discussion then in the classroom. Unfortunately we don't have enough equipment" (Appendix G).

Teacher A stated that if they had more computers in their classroom they would be inclined to use more ICT within their class. They also had an issue when using the computer suite that student' work had been destroyed. They now have USB sticks for each student in their class and distribute them at the beginning of class and collect them at the end of class. They recognise that this is more responsibility and work for them but they feel that it is more beneficial in the long run for both themselves and the students.

5.2.3 The attitudes that Food and Nutrition teachers have towards the potential benefits of ICT use in their subject area.

Ertmer (1999) indicates that the level of ICT integration achieved by teachers is ultimately dependant on their attitudes towards the use of technology. All interviewees believed that ICT played an important role in their work. Teacher A used ICT to develop new classroom material for their class. The benefit of these materials is that they can cater to the various levels of the students. "*Instead of numbers, I have words. A word bingo and all the words are to do with cookery. I have, say we're talking a carrot – I have a picture of the carrot below it. I was able to make these using the internet and computer and they are great for using in the classroom*" (Appendix F).

The integration of ICT into the curriculum has implications for the professional development of teachers (NCTE 2000). Teachers have to become aware and recognise how ICT can be integrated into the learning environment. As previously seen, there were discrepancies between the teacher's perception of their use of ICT within the subject area and the student's perception of use within the subject area.

The literacy coordinator gives a monthly literacy report at staff meetings and would hand out information relating to student literacy profiles to staff members. This information looks at where the students are at in relation to their reading, spelling and maths. Staff can then see where the problem areas are and this can be then picked up on and worked on. The literacy coordinator stressed that a team approach was important and integration of literacy across the board was essential to maximise the benefits for the students.

When asked if there was any recommendation to encourage the use of ICT, teacher B emphasised the need to give staff more courage to use it. "*And obviously to make them realise that, you know, that it's not as time consuming as they think it is. You know, a lot of them just don't have the courage to start using it*" (Appendix G).

5.2.3.1 Overcoming Barriers

Becoming comfortable with the technological environment is an important barrier that needs to be overcome in order for an effective learning environment to be established. Peterson (1999) found that many teachers are reluctant to use technology within the classroom as they may feel inadequate in this area in comparison to the students. Using technology is a different process to using text books. Teachers are required to learn and use new skills and also, perhaps more importantly, are required to change their perceptions of learning and teaching, which can lead to changes in pedagogy and teaching practice (Oliver 2001). Some teachers, who are accustomed to the traditional classroom and traditional methods of teaching, may find it difficult to develop pedagogical strategies to promote the use of different teaching methods within the classroom.

Both teachers and the literacy coordinator have received ICT training and felt that training is important. All staff interviewed availed of the opportunity to do an ECDL course which was provided by the employer. Teacher A felt that while the training was good for some parts, there were other parts of it like databases that they would

never use and would have preferred if training could be provided that would be more suited to their needs. Both of the other staff members interviewed, felt that the ECDL course was very beneficial to them and that they would use much of what they learnt in their working areas and especially for classroom preparation. The literacy coordinator stated that she would use various programmes for compiling reports and for presenting data to staff.

Motivational factors also influence whether teachers use and embrace ICT or not. All interviewees stated that they did receive ICT training and stressed that they do and are willing to incorporate ICT into the class. This is supported by Ertmer and Hruskocy, (1999) who found that teacher's motivation is crucial when overcoming barriers in the use of technology. As teacher B previously mentioned, staff need more courage to start using technology and to become aware that it's "*not as time consuming as they think it is*" (Appendix G).

It was acknowledged during staff interviews, that more ICT training is needed. Interviewees also felt that it is important to keep up to date with training and technology changes. One teacher specified that training in the use of the interactive white board would be very beneficial within their subject area. The literacy coordinator felt that she is unable to access the interactive white board as it is in a general classroom which is in use for the majority of the day. She did however acknowledge that if it could be used on a regular basis for class it would be a huge advantage as there is a huge amount of information on it as well as the ability to create your own worksheets and design your own lessons.

Both Food and Nutrition teachers show enthusiasm, creativity and dedication for both the subject and the students. If the lack of resources were not a factor in classroom planning both teachers would be extremely creative in their approaches. They both felt restricted by the lack of resources. Unfortunately for many schools, the set up of such an infrastructure can be a costly process and is often beyond their financial

capabilities (Vrasidas and McIsaac 1999). Local factors can often determine the location of ICT equipment within the school.

5.2.3.2 Balanced Curriculum

A curriculum that balances the academic with the vocational may be useful in order to enhance the different intelligences that students have. Students within the Youthreach programme are offered this type of curriculum. Different types of software are available to suit a variety of different learning styles. Schools can now buy a huge range of software and this can be used as an aid in the classroom environment. Teachers are not under the pressure of programming the application themselves. This means that those teachers who are less capable with ICT, can now incorporate it into their classroom and use it as a teaching tool. However teacher A explained that trying to juggle all that they are expected to do can be very time consuming and can put them under pressure. "*You know, trying to get the literacy included, the class done, keeping the class behaved and them using computers on top of that ….it's frantic at times and we are expected to get them passed their FETAC Level 3. Sometimes it's easier to photocopy a few pages out of a workbook and get the class to do that*" (Appendix F). Jager and Lokman (1999) and Henry and Clements (1999) concur with this, stressing that the restrictions and boundaries of timetable and curriculum can prevent the integration of ICT for some teachers.

New educational technologies are emerging frequently. The ability to determine the effectiveness of the technology and software that is available still remains a challenge for many teachers. Teacher A supports this by saying that they are aware that there are "*masses of software and stuff out there but I don't have the time to go trawling through it all*" (Appendix F). As Townsend (1997) found, not all software is suitable in all learning situations. It is necessary to look at the issues of time and training for staff. This experience should not just be confined to the computer class or within the computer room; it should be used to enhance learning in all subjects across the

curriculum. The effective use of ICT supports differentiation within the curriculum to suit the range of learning needs and styles of the individual student (NCCA 2004).

In today's society teachers must acknowledge that they need to go beyond the basics and prepare students for a life that is drastically different from that which they experienced. Teacher A stated that "*We made Easter cakes and the amount of students that came back and said it was the first time they've ever baked a cake, it was amazing. I mean, I've been baking cakes since my childhood, you know. And you think that everyone else is doing the same thing. And they've baked a cake and they've taken it home, and wanted photograph taken of it, you know*" (Appendix F).

5.2.3.3 Hands-on learning

The value of hands-on learning is that it imprints knowledge into a young person's mind via sensory awareness. Specialists in child development believe that it is important to give children a broad base, both emotionally and intellectually, incorporating the five senses, before something as one dimensional as a computer is introduced to them (Graham and Wright 1997). Computers at best only engage two senses: hearing and sight. The FETAC Food and Nutrition module encapsulates all the senses. From the questionnaires it was discovered that 100% of respondents acknowledge Food and Nutrition as an important lifeskill, even though they themselves may not like the subject. When asked what they enjoyed about the subject, 79% said that they enjoyed the cooking and eating aspects of the subject. The practical hands-on element of the subject, which incorporates all five senses, was the favourite aspect of the subject, among a majority of students. Bandura (1997) and Jarvis (2001) both placed importance on the social environment to allow learning to take place.

The internet, email, mobile phones etc all provide opportunities to communicate via technology and communication is an essential part of learning. Interactive technologies provide environments encouraging the student to become involved.

Dewey (1938) emphasised the place of experience in education. Students cannot really know what is important for them to learn especially in areas that they have no prior knowledge of. This is where the role of the teacher becomes important. The FETAC teacher has a module to follow and therefore designs class lessons around this. The student feels that because they are not actually working on a computer that they are not engaging with technology. As Keen (2006) stated, because students are familiar with so many electronic resources, their expectation in terms of learning environments are very different to even a few years ago. Both focus groups felt that every young person knows a lot about computers before they come onto the programme. They felt that young people use computers socially on a regular basis and are confident when it comes to using them in a classroom situation.

5.2.4 The role that ICT/computers can play in literacy development and literacy integration across the Youthreach programme

As previously mentioned developing positive self-esteem and positive attitudes about learning amongst students is a huge role of the Youthreach teacher. The teaching process cannot simply be seen as something that is transmitted from the teacher to the pupil. In the past it was the student who was seen as having the problem. Young people who are outside the education sector, have an increased chance of being disadvantaged throughout their lives, as well as having an increased chance of experiencing inferior health (Graham and Power 2004). It is the role of the teacher to try to offer learning activities that will appeal to the widest variety of learning styles. The multi-sensory style of much of the ICT software that is available, can help with the different learning styles of students (NCCA 2004).

5.2.4.1 Self-confidence and Motivation

ICT can encourage students to construct their own knowledge and give them the confidence to support and promote the development of personal and interpersonal skills, such as negotiation, communication, time management and organisational

skills. The Department of Education and Science survey (2004) found that students think that they are more independent and they display skills showing that they are more independent. When the literacy coordinator was asked what difficulties are present she mentioned attendance, low self esteem and how a student's previous school experience can have a huge negative effect on both their attitude and outlook while on the programme. She felt that if student self esteem and self-belief could be increased, this in itself would lead to greater self-confidence. This is supported by Tillecczek (2007) who found that it was those from lower socioeconomic backgrounds that found the transition from primary to secondary education most difficult.

Motivating people would be easy if all people were alike. If all students' characteristics and personalities were the same and if they all had the same interests, needs, wants and desires, there would be no variation of learning styles and the job of the teacher would be very undemanding. Although you cannot force students to become motivated, you can create and maintain an environment where students are likely to become motivated and interested in what they are doing. Studies have shown that ICT has a positive motivational effect on learning. (Department of Education and Science 2004: Grabe and Grabe 2001). If the student does not understand, then they will most likely not pay attention and learning is more difficult.

Although 100% of respondents acknowledged that Food and Nutrition was an important lifeskill to have, only 11% liked learning about food and 55% did not enjoy the theory/bookwork aspect of the subject. Teacher B stated that "*A lot of them would come from low socio-economic backgrounds and they don't understand how food and nutrition play an important role in their lives. Because of lot of them now are used to the ready meals and snacks, you know, so it's to bring that whole nutrition aspect of it to them and how it's going to affect their long term health*" (Appendix G). As the Mela (2001) report showed, there were considerable differences in health outcomes across socio-economic groups.

5.2.4.2 Developing Literacy

Getting the right balance between the practical side of the Food and Nutrition subject and the theory side posed an issue with both teachers. As Food and Nutrition is a practical subject teacher A felt that it was important not to lose sight of the practical aspect of the subject and that it was a "*hands on subject*" (Appendix F). They felt this could be part of the reason that some students find it difficult when it comes to the theory and nutritional side of it. From some student's point of view it's not a 'book subject and therefore they shouldn't have to do paperwork.

Teacher A also used ICT to develop class materials and states that "*Because you can not only make your worksheets, you can adapt them literacy wise and add pictures and different things. Obviously numeracy is also a problem so you can use the worksheets for that as well and make the print very adaptable to them*" (Appendix F). The literacy coordinator also compiles her own resources and along with different staff, produces booklets for various subjects. These booklets are beneficial for students; they are at various levels and are appropriate to the subject area that students are working on. As previously mentioned there is no national syllabus for FETAC modules and this can allow for great flexibility and adaptability by teachers.

As teacher B stated "*A lot of our learners would have reading ages maybe as low as 8 years old, you know. And that can present terrible problems, even when you're shopping and looking for different items and things. Literacy can become a big problem here*" (Appendix G). Teacher A stated that lack of attendance and literacy skills caused difficulty within the classroom and "*some have very poor literacy skills and numeracy skills. And it's quite difficult for them – like even to weigh something. Even to turn on the oven, when you say 150, they don't know what 150 is. Or to turn on the grill, they don't know the word grill. You know, you have to ……it's nearly a one to one, it's almost a one to one all the time*" (Appendix F).

When asked what difficulties present themselves, the literacy coordinator felt that English, not being the first language of some students, created difficulties. Learning difficulties such as ADHD and dyslexia were also mentioned. Attendance or lack of attendance caused difficulties for staff. Lesson plans would be created and then "*you mightn't see them for maybe two weeks and you have to go back and find out where you were at and start off again*" (Appendix H). All staff interviewed felt that a student's lack of confidence in their own ability and their low self esteem were factors that contributed to the student's progress on the programme. This ties in with England's DfES 2003 study which found that increased confidence played an important role in student's progress. The literacy coordinator provides individual support to students in literacy generally and also helps them with specific subjects if they need support. She acknowledges that when a student's confidence begins to increase she sees a huge improvement, in both their attitude and work. The DfES 2003 study supports this and asserts that student's ability in themselves and their ability to perform tasks increases with an increase in their confidence.

The flexibility that technology allows can cater for various learning styles and various environments. Both focus groups identified that using ICT/computers helps people who may have learning difficulties and focus group 2 stated that using computers can help someone who "*mightn't be as good at reading and writing as everybody else"* (Appendix D). By compiling a wide range of suitable vocabulary and concentrating on these throughout the class, the student can concentrate on specific words. Part of the

literacy coordinator's role is to support staff in the area of literacy integration. This includes meeting with them and compiling flash cards of key words that are used within subjects and displaying them in a prominent position within the classroom. The role also includes discussing with individual staff how they can incorporate and integrate literacy into their subject area when they are teaching. This is supported by Johnson *et al* (2000) who found that peer and team teaching increase student's confidence and self esteem. There was some concern from one member of staff that if they are focusing on literacy outside of the Communications/English class, it will

take time away from their own subject but both teachers acknowledged that literacy was an important and vital skill for the students and both felt compelled to help them in any way possible.

If a student has poor literacy levels this can be a contributing factor in their performance throughout the day. However, it can also influence their happiness and success throughout life. Language is one of the most important accomplishments of humans. Language is a communication process. It encompasses the elements of listening, speaking reading and writing. It's a lot to put together all at once and a breakdown can occur anywhere along the process (Lerner 1993).

Students who have difficulties with written language often have negative perceptions towards all writing and text and this can also create within them negative perceptions in their own abilities to communicate especially through writing (Gregg and Mather 2002). Focus Group 2 did express that they preferred using the computer to write because then "*if you make a mistake you don't have to do the whole thing over again and it helps with spelling*" (Appendix D). Spell check and the dictionary were also cited as examples of how technology can cater for the student who has literacy difficulties. The literacy coordinator also supported this method and felt that it would initially help build up a student's confidence in their work and encourage them. Foreign national students on the programme also felt that this software helped them as well as having their own various technology devices such as dictionaries and translators to assist them throughout the day.

5.2.4.3 Differentiation

Becker and Ravitz (1999) believe that differentiation within the classroom can be catered for, when teachers use different teaching methods. Eighty percent of students stated that they did not use ICT/computers during the Food and Nutrition class and 90% felt that Food and Nutrition would be more interesting if ICT/computers were used. Both teachers stated that they did use ICT/computers during the teaching of

their subject. Focus group 2 felt that one advantage of using ICT/computers within the classroom was that it allowed them to work at their own pace and "*sometimes if we have different tasks we can do them individually. You'll have to do it yourself anyway which means, you know, it'll be just you and everyone will have different information because there is so many websites that you check on. Then you learn more because everyone has something different*" (Appendix D).

Through observation the author noticed that there were flash cards displayed within the kitchen and classroom area as well as on all utensils and items were also labelled. It was apparent that the teachers and students had different perceptions about the use of ICT/computers within the class. Teachers used ICT/computers much more in preparation for the classroom while students wanted to experience ICT/computers during the class and in a more hands on manner. Focus group 2 felt that if they were given the opportunity to use PowerPoint in more subjects, especially practical subjects, it would help them during class. They would feel more involved and take a more active role in the class and they also felt that their retention of detail within the subject would be better.

Focus group 1 did acknowledge that the times that they did use the interactive white board led to an interesting class and they referred to it as a brilliant method of teaching. One member of focus group 2 stated that "*during that class, the one with the white board, I behaved myself the whole time and I usually get into bother in that class*" (Appendix D) This was supported by teacher B who stated "*It lightens the whole theory side of it as well. It makes it very much hands on for them too. And more involved*" (Appendix G).

Because of literacy difficulties, students do not read the labels on food items and have little knowledge or awareness of the content and packaging of food. This, along with the convenience of fast food, is contributing to the excess weight and obesity epidemic that is engulfing the world. Teacher A stated that the majority of their students have never made scrambled eggs and 90% have never tasted an omelette.

This lends itself to the National Food Alliance/MORI study which indicated that cooking skills are becoming a thing of the past and many people rely on foods that are convenient and easy to prepare but may be of little nutritional value. As Balanda and Wilde (2003) found, early school leavers are half as likely as those with third level education to have excellent or good health.

5.3 Summary

Technology has emerged in recent years as a very powerful tool to assist the teaching and learning process. Studies have shown that learning with technology can motivate learners and assist in literacy development. One advantage of technology assisted learning that might be especially relevant within a Youthreach setting is that it can assist learners to learn at their own pace. Students that participated in this study expressed a clear preference for learning with the aid of such technology.

Technology can promote learner centred learning environments and in doing so help engage the learner and allow them to take ownership and control of their own learning. However, the teacher is a vital cog in this process. Teachers need to be trained adequately and have access to appropriate ICT resources in order to fully exploit the potential benefits from ICT. Any barriers preventing, this need to be addressed and eliminated.

Chapter 6 Conclusion and Recommendations

6.1 Effectiveness of ICT/Computers within the learning environment for students.

The potential that ICT/computers provide within the classroom has yet to be fully realised. Teachers can become more flexible within the classroom and this can allow for differentiation to take place. Differentiation within the classroom is vital for the student within the Youthreach setting. Primarily, this can contribute to their Individual Action Plans as well as helping them to integrate and behave appropriately in the classroom.

The core element of teaching remains the same, namely to increase performance and learning. What has changed, are the technological tools that are used to assist this process. The computer is not a substitute for the teacher; it is merely there to complement existing styles of teaching. However, technology may also promote constructivist approaches to learning. It should be exploited as a support and also for the teacher's own professional development. Physically placing technology within the classroom is easy, integrating it into teaching and the curriculum is more difficult.

The findings from this study indicate that students have a strong preference for the use of technology during the learning process. Numerous studies, as outlined in Chapter Two, have shown that learning can be enhanced and indeed learners can become more motivated through the use of ICT/computers (Cohen *et al* 2004; Grabe and Grabe 2001; Kosakowski 1998). Emphasis should be placed on active and engaging learning approaches, where students are encouraged to take ownership of their learning. Consistent with traditional teaching, students will however, get out of a learning community what they put into it. Some will participate more than others, irrespective of what methodology is used.

6.2 Integration of ICT/Computers in FETAC Food and Nutrition

The Department of Education and Skills need to provide clearer guidelines on how to integrate ICT/computers into teaching and learning. Although it is important for it to be integrated across all subjects on the Youthreach curriculum, it is important that it is also taught as a stand alone subject for the students to master the basics and be able to carry these skills to the other subjects.

Health and a healthy lifestyle are becoming more and more of a concern amongst the medical profession and governments. Education has been identified as the main facilitator in assisting people to become more aware of their lifestyle and eating habits. Youthreach acknowledges this, with the provision of the Food and Nutrition module within its curriculum.

Although there was a difference of opinion between the teachers and students as to the level of integration of ICT within the area of Food and Nutrition, the author has noted that there is currently a lot of technology use within the subject area. However, increased integration could be facilitated but there are some factors which prevent this from happening. These include time management (especially for part-time staff) and lack of resources and training. The lack of technical assistance and troubleshooting was identified as a drawback.

The ability to fully integrate ICT/computers in this area is not possible as it is a practical subject. The effectiveness of ICT/computers can increase with the use of DVDs, research facilities on the internet and the ability of the teacher to allow for differentiation within the classroom.

6.3 FETAC Teacher's attitude towards ICT/Computers in their subject area

Attitudes towards the use of technology by both teachers were very positive. Both teachers were not worried about the changing nature of education due to technology and welcomed the diversity that it could potentially bring to the classroom. They also felt that they were supported by their colleagues in this area and this support helped to foster their attitude towards and use of technology. Where people work together they often learn from each other and help each other to understand. Through the building of greater professional understanding and communication, collaborative approaches may be enhanced, enabling the development of more effective practice, with the aim of improving outcomes for children with learning concerns.

One issue that emerged is the development of educational software for specific subject use. Specific software is tailored for individual subjects and helps teachers to target areas of difficulty within that subject.

6.4 Effectiveness of ICT/Computers with literacy

The use of ICT/computers with students who have presented themselves with literacy difficulties has been to a great extent beneficial. Numerous studies have found that the use of ICT enhanced teaching and learning.

There are many software programmes available for this purpose. It is acknowledged that it is time consuming to find software that it suitable for this particular purpose. The Newell Literacy Programme is currently used on the Youthreach programme and this was decided by the literacy coordinator and coordinator of the programme. It is available on all computers and this allows students to work alone or with their peers. This contributes to the student participating in the class and not having to be taken

out for extra support, which can sometimes lead to resentment and a feeling of not being good enough.

6.5 Limitations of the study

Because of the nature of technology, the lack of face to face interaction and non verbal communication makes it difficult to measure its success in some situations.

The results of the study are limited in the size of the sample that was carried out. The selection of a very small, purposive sample could have the potential for bias and may not provide a representative view. More research in this area needs to be undertaken to enhance the reliability of the findings.

Another limitation of the study refers to the validity of the data. The results are snapshots taken at one particular point in a process. The conditions of the process at that time will determine to an extent the way in which individuals and focus groups have responded. A complimentary study might focus on a greater number of cases, over a longer period of time and involve a greater number of people.

6.6 Recommendations

- All teachers need to be trained in the use of ICT/computers in their subject area

- Specific subject software should be provided to all teachers

- More subject specific training should be provided by FETAC, the VEC and the Department of Education and Skills

- There should be an increase in training and specifically, training in the use of the interactive white board

- An in house training system should be developed, allowing teachers that are confident and successfully using ICT to demonstrate and train other teachers

- Literacy development should be prioritised and developed on the programme

6.7 Recommendations for further study

Further study, by means of a cross sectional study, could be carried out to ascertain the degree to which the findings from this study are reflected in other Youthreach settings.

In addition, further analysis could be conducted into the effect that gender and ethnicity have on the various factors highlighted in the study.

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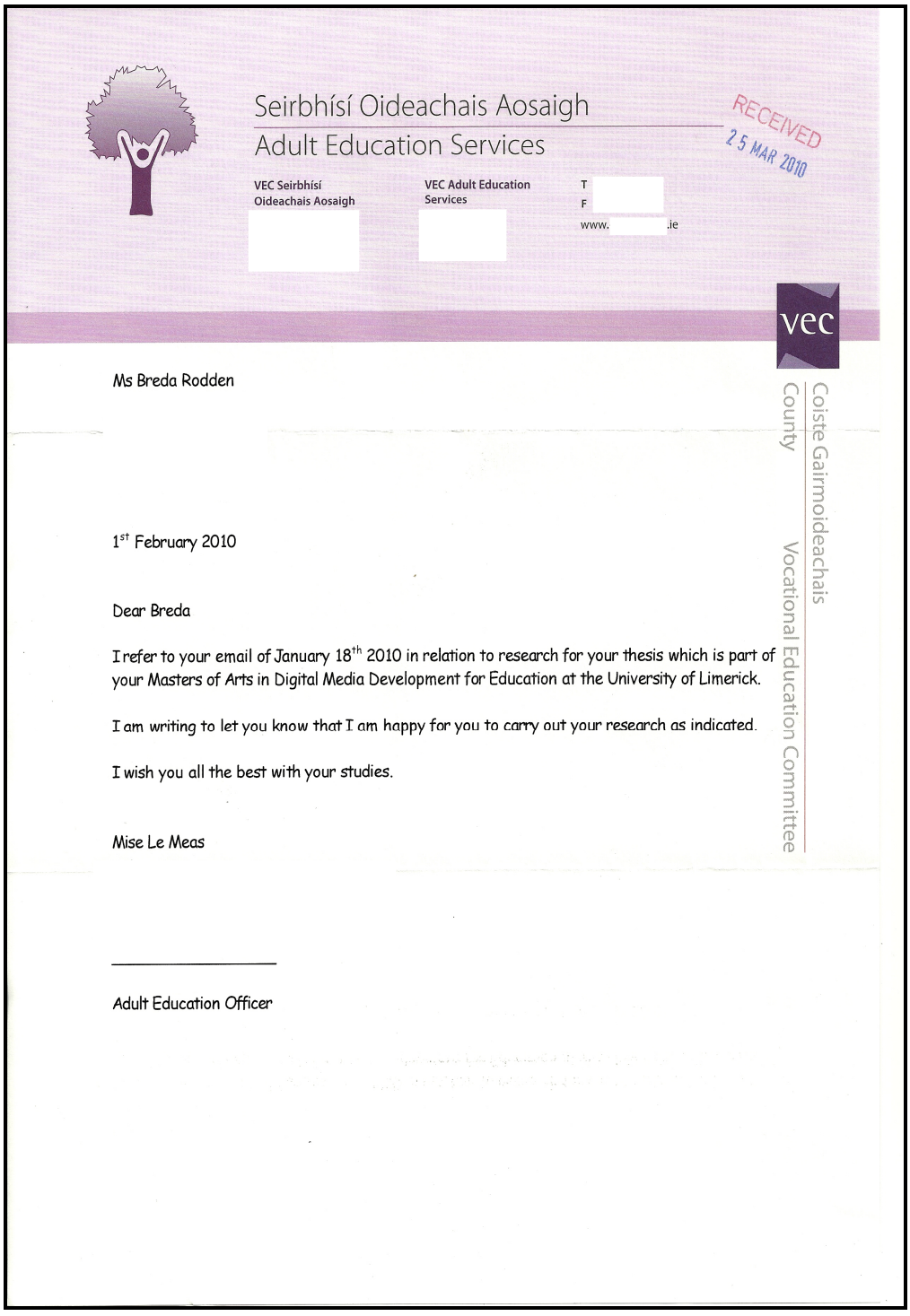
Appendix A

Permission Granted by VEC



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Adult Education Services

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Coiste Gairmoideachais Contae
County Vocational Education Committee

Ms Breda Rodden

1st February 2010

Dear Breda

I refer to your email of January 18th 2010 in relation to research for your thesis which is part of your Masters of Arts in Digital Media Development for Education at the University of Limerick.

I am writing to let you know that I am happy for you to carry out your research as indicated.

I wish you all the best with your studies.

Mise Le Meas

_____

Adult Education Officer

Appendix B

Student Questionnaire

Student Questionnaire

Please complete the following questionnaire

Answers will be kept in the strictest confidence

		Yes	**No**
1.	Is Food and Nutrition an important life skill?	☐	☐
2.	Do you like this subject?	☐	☐
3.	What do you enjoy about Food and Nutrition?_____ _____ _____		
4.	What do you not enjoy about Food and Nutrition?_____ _____ _____		
5.	Do you use ICT/computers in this subject?	☐	☐
6.	Would the use of ICT/computers make the subject more interesting?	☐	☐
7.	What do you enjoy about ICT/computers? _____ _____ _____		
8.	What do you not enjoy about ICT/computers?_____		

_____

_____

9. Do you think that you learn better using ICT/computers? ☐ ☐

10. Would you enjoy Food and Nutrition more if you used computers?

☐ ☐

Appendix C

Transcript of Focus Group 1

Appendix C Focus Group 1

Instructor: Hello everybody. I wonder first of all if we could just have a brief conversation about what ICT is. Can any of you give me an example of what you think ICT really is?

Student 1: I-pods, play stations and video games

Instructor: That's what it means to you? Have you any ideas?

Student 2: Computers, DVDs.

Student 3: Videos and recorders.

Instructor: Yeah, like the thing that we're actually using here, this is information computer technology. Okay – any other ideas? Have you seen any?

Student 4: Phones, i-phones, camcorders

Instructor: So basically ICT is? What does it mean to you?

Student 4: Technology, computers, information.

Instructor: Right, so anything that can impart information through technology? Do you use technology?

Student 4: Yeah. I use the i-pod and internet.

Instructor: Okay. What do you use on the internet?

Student 4: I use twitter, facebook and BEBO. Though I think they are going to close BEBO down.

Instructor: Do the rest of you use these sites?

All Students: Yes.

Instructor: Ok, any other examples of technology that we would have in this classroom?

Student 5: DVD, TV.

Instructor: DVD and TV. The ordinary TV? Yeah? And how would the TV be any good – how would you see that as being useful?

Student 5: It's interesting.

Instructor: What do you see on TV? What good is TV? Like you imagine years ago when there was no TV – how is it different now? What do you know now that people 50 years ago didn't know?

Student 4: Because you can get cookery programmes.

Instructor: You could, yeah. Yes, anything else you can get on TV?

Student 4: News, yeah - all over the world, there's history channels, geography channels, nature channels, stuff like that.

Instructor: Brilliant. So that's what it means to you, it's really any way that you can get information through technology. Okay, well done. What would you think of the advantages of any kind of information technology?

Student 4: It's more interesting, it's colourful, it's moving, it's easier to interact.

Instructor: Okay good. What would you think? Say for example you were in a class and one teacher had no ICT and another teacher had, which class do you think would be more interesting? The one with the ICT or none?

Student 3: The one with. Your not sitting with a book all day, every class isn't the same then and it would be more interesting.

Instructor: You think so? Right, have you any reasons for that?

Student 5: It's interesting.

Instructor: How do you mean it's interesting?

Student 5: Well you get more pictures; the sound can be turned up and down. You get plenty of things out of it.

Instructor: Good. Do you think in a class with, say a teacher showing a DVD or letting you on the internet is more interesting, than a classroom, say, where it wouldn't be?

Student 5: Yeah.

Instructor: For what reason?

Student 3: To find out more information and you're getting the stuff yourself.

Instructor: Right, so it broadens your horizons, is that what you're saying? So if a teacher just had her stuff in front of her, you wouldn't have the same access to information. Now, are there any disadvantages, do you think, to using it?

Student 4: It's more expensive.

Instructor: How do you mean more expensive?

Student 4: It's the equipment. You have to pay for the stuff – computers, phones.

Instructor: Yeah

Student 4: There's viruses.

Instructor: What do you mean when you say viruses?

Student 4: Spam-mail, firewalls, stuff like that basically, you have to pay for all the firewalls and all the anti-viruses.

Instructor: Excellent. Any other disadvantages you can think of?

Student 1: It's not easy to work.

Instructor: It's not easy to work – what do you mean by that? You mean that not everybody would be able to use an IPod?

Student 1: Yes, some people just don't understand how to work computers.

Instructor: Okay exactly. And who do you think? Do you think younger people are better?

Student1: Younger people and older folk.

Instructor: Yes but who do you think is the best at using it? Do you think younger people know more than say the older people?

Student 1: Younger people, because we're up to date. Every young person knows how to use computers. They know how to use them better than older folks.

Instructor 1: Say in the centre here, in all the subjects that you have here – say the practical subjects you have, woodwork, cookery – do you think using ICT is an advantage in any of those classes?

Student 2: It can be yeah. If they ask you to look up something you can look it up on the internet. It's easier to do that than it is to look in a book.

Instructor: Say for example maybe if you were doing Food and Nutrition in cookery, how would the teacher who has ICT have more stuff than another teacher that didn't have it. Maybe when you'd be talking about recipes or say for example Health and Safety – how about that?

Student 1: DVDs, the internet – there's pictures and videos on the internet.

Instructor: Yeah, what about YouTube and stuff like that? Do you see any of that being of help or is that completely different?

Student 2: You probably would find something.

Instructor: Can I just ask you – would you prefer to be in a class that had ICT than not? Would you prefer to be in a class, say you were doing cooking, Food and Nutrition, health and safety – would you rather go into a class where you knew there was going to be the internet, a DVD, rather than a class that wasn't.

Student 3: Yeah.

Instructor: Why?

Student 3: You learn easier from it.

Instructor: You learn easier from it? Do you find you learn quicker?

Student 3: Yeah, and it's more interesting

Instructor: Is it more interesting than somebody just belting out a bit of information?

Student 3: It's better than a teacher standing at the top of the class reading out from the book and that's just what the teachers did in schools and here was meant to be different.

Instructor: Okay. I'm interested to hear about something – have any of you in the past ever have worked with an interactive white board?

Student 1: Yeah

Instructor: Where did you do that?

Student 1: In school.

Instructor: Where were you in school?

Student 1: In England.

Instructor: So would the teacher actually let you participate on the board?

Student 1: Yes

Instructor: Can you just tell me, like, what subject where you doing at the time?

Student 1: English

Instructor: English? And you went up to the board to do what?

Student 1: Write questions.

Instructor: And do it on the board? That's real information technology. And what did you think of that?

Student 1: It was good.

Instructor: And you, have you used an interactive white board?

Student 4: Yeah, in England as well.

Instructor: In England as well? Have you ever used one in a classroom in Ireland yet?

Student 4: No.

Instructor: Talk to me about your English experience. What subject were you doing when you were doing that?

Student 4: Computers.

Instructor: Right, and how would you use the interactive whiteboard?

Student 4: Writing on a worksheet.

Instructor: So if they had a worksheet they'd put it up, you'd use that?

Student 4: Yeah, yeah. You'd write one at a time.

Instructor: One at a time? Very interesting. And did you think that was a good method of teaching?

Student 4: It was brilliant. During that class, the one with the white board, I behaved myself the whole time and I usually get into bother in class.

Instructor: And can you tell me – how would it help here if we used it?

Student 4: You get more involved in the work. Everyone can see what's going on and you can help the person up at the board if they are stuck.

Instructor: Right – anything else? Would it be less boring?

Student 4: Probably, yeah.

Instructor: You'd have people up and down, through the classroom? Would it be disruptive do you think?

Student 4: Not really, no.

Instructor: Not really, it doesn't go like that. Okay, I'm really interested to hear again – did you use the interactive white board?

Student 1: Yeah.

Instructor: What class were you in?

Student 5: Maths

Instructor: And you went up to the board, and you did your worksheets on the board? Do you think we should use that here? Do you think you'd prefer it?

Student 5: Yeah.

Instructor: Right okay, that's very interesting – thank you. So would you say, in effect, that it's easier to learn using those things?

Student 5: Yeah

Instructor: Easier than just a teacher belting out the stuff and you trying to write it down. What, now, can I ask you – if you don't mind – about people who have literacy difficulties? How do you think information technology would help them? Say someone that was having difficulty writing – their literacy levels were low.

Student 4: Well it's easier to type than doing any writing – just type and watching DVDs and stuff like that.

Instructor: Okay so, for those people with literacy problems, ICT would be a good advantage.

Student 4: Yeah. You can use spell check if you're not sure of a word and if you make a mistake you don't have to write the whole thing out again. That's brilliant.

Instructor: I'm thinking about different subjects, say for example just cookery, if

you don't mind me going back to that one again. Say you had ten worksheets, but you had the choice of doing the class on DVD. You know, your teacher doing it on DVD start to finish. You know, you telling the instructions, you making the cake and then you evaluating the cake. Do you think it would be easier to do it just being recorded than having to write it up?

Student 3: Recorded

Instructor: Recorded – you'd prefer that – why?

Student 3: Because of writing, some people have writing difficulty, spelling. They mightn't understand it properly.

Student 4: It's a lot easier. Cookery isn't meant to be a book subject, when I'm doing cooking I want to cook not sit with a book during the class.

Instructor: It's a lot easier? Has any teacher ever used that with you before – instead of writing things out?

Student 4: Yeah

Instructor: Yeah? Have you ever done any subject on DVD?

Student 4: Yeah

Instructor: Do you prefer it than having to write?

Student 4: Yeah.

Instructor: Because you're English wouldn't be great yet, so it's much easier. Okay that's excellent. Anything else any of you want to add? Can I just have all your opinions now? So generally what you're saying to me is that ICT is a good thing in the classroom situation.

All students: Yeah

Instructor: Because of what some of the things you said it was.

Student 1: It's more interesting.

Instructor: More interesting?

Student 1: Yeah. It's less boring than a teacher standing up in front of the class. We know that we can't watch DVDs or go on the internet for every class but every now and again it would be good. Say if the teacher showed something for 15 minutes and then we talked about it for a wee while and then did some worksheets

that would be good. Every class it's worksheets, worksheets, worksheets and if you're not good at writing it takes you ages and that make you feel stupid.

Instructor: Would you agree with that?

Student 3: Yeah. Using the interactive white board– that would make the classes far more interesting.

Instructor: Rather than just sitting for 40 minutes, if there was a mixture of ICT. What, can I ask you, would be your favourite IT thing to use in class?

Student 4: DVD

Student 2: The internet.

Instructor: The internet? Why, can I just ask you?

Student 2: Browsing and if your asked to research something you can look it up on the internet. It's easier to do than it is to look in a book.

Instructor: To browse information?

Student 2: Yeah.

Instructor: Okay, would you do that a lot?

Student 2: Sometimes.

Instructor: Would you like to be allowed to do it more in class here?

Student 2: Yeah.

Instructor: Do you think that the internet should be in every classroom?

Student 2: I suppose it could be.

Instructor: Do you agree with Net Nanny? (Filtering Software)

Student 2: Not really, no.

Instructor: Do you think you would look at a lot more?

Student 2: Probably, yeah.

Instructor: Do you think it cuts out too much stuff for you?

Student 2: A bit.

Instructor: So, generally speaking can I just have a consensus here to finish up. Generally speaking ICT in the classroom situation is better than not?

All students: Yeah

Instructor: You would all agree?

All students: Yeah.

Instructor: That's fine, thank you all very much.

Appendix D

Transcript of Focus Group 2

Appendix D Focus Group 2

Interviewer: Hello I want to thank you all for coming today and having this discussion with me. The first thing I want to do is to get your ideas on what ICT and computers and technology means to you. What are your ideas about that?

Student 1: Computers – like games – Play Stations, Nintendo Wii's, X boxes, CD ROMs and stuff like that.

Student 2: If I ever had, like, to do letters, I could write them up on Microsoft Office and that.

Interviewer: Very good. So is there anywhere outside of education where you would use computers and technology?

All students: Yeah

Interviewer: How?

Student 5: I use BEBO and Facebook all the time. And texting, I text my mates quicker than speaking to them.

Interviewer: So you would use it sort of socially?

Student 5: Aye

Interviewer: Ok. What's the good things about computers? Or the advantages of technology or ICT?

Student 1: You have everything in the one place.

Student 4: Buying stuff on the internet, looking up stuff – say if you're looking up a word on the computer or Wikipedia, it's quicker than using a dictionary.

Student 2: It's easier to organise, everything's all in the one place. You don't have to go and find stuff in different places. When you save stuff it's all in the one folder.

Interviewer: What would be the disadvantages or negative things about ICT?

Student 4: It can be slow sometimes, it freezes and your work is lost.

Student 2: Yes.

Student 5: Your work can be lost.

Student 4: But you can do backups and that.

Interviewer: And what would you use for backups?

Student 4: You could back it up on memory sticks.

Interviewer: Memory sticks. Yes. Say now if we focus in on your course here in Youthreach – how is computers important or how would you use computers or ICT?

Student 4: Typing up assignments, making it look better.

Student 1: You can make it presentable.

Student 5: Yeah, like PowerPoint.

Student 2: For class you can look up information on the internet, research, like. Using the interactive white board is good too but we haven't used it very often.

Interviewer: Ok when you did use it what did you think of it?

Student 1: It was brilliant, the class flew by and the whole class was more involved in the work.

Student 4: Yeah it was brilliant.

Interviewer: Very good, and would you use ICT for a lot of subjects, or just in your computer class?

Student 4: In all subjects. Sometimes we use the Nintendo DS for quizzes and maths but we don't use it a lot.

Student 2: We use it in every subject.

Student 1: We watch DVDs for different subjects. It great for subjects like Social Studies because you can get loads of stuff on DVD for that.

Interviewer: So for every subject? And what about, how do you find the instructor that's teaching you. Like, say the computer instructor, well hopefully they would know about computers, but maybe not all the instructors would know about computers. Is that a problem?

Student 1: I think young people would know more about computers than what others would. But the teachers we have would know a lot.

Interviewer: So you are finding that all the young people, well actually the majority of the young people would be quite literate in computers. There would be very few that wouldn't? Very good. Say now for practical subjects, say like Woodwork or Food and Nutrition when you're doing those subjects, or Health Related Fitness – do you use ICT in those subjects?

Student 2: The practical stuff wouldn't be done on the computers but the stuff to do with typing up or making a folder of it, you would use computers. It makes it more presentable.

Interviewer: And for all your subjects you would have theory as well – wouldn't you?

All students: Yeah

Interviewer: Aye you would. Say now like on the programme here and people who may have literacy difficulties or who may have some learning difficulties, do you think ICT is beneficial for that?

Student 1: Yeah because if you get the wrong word, it tells you on the computer.

Student 4: It tells you, aye and it's far easier to type than doing writing.

Student 1: The teachers are good with words and spelling.

Student 4: It probably builds your confidence as well.

Interviewer: And you said there, that if you didn't recognise a word or if you weren't sure of a word, would you have to re-write the whole thing or anything like that.

Student 1: You just right click on it and it comes up with different words.

Student 2: Spellcheck.

Interviewer: Now, not to single you out, but I'm aware that you're from a different country and English wouldn't be your first language – how do you find technology or ICT – would it be beneficial to you?

Student 3: Absolutely yeah, I use the word processing so it's easier to get done

Interviewer: In what way would it help you?

Student 3: Like the internet and if I want to check something it does it straight away.

Interviewer: Oh, fantastic. Have I seen you with a wee electronic dictionary?

Student 3: Yes.

Interviewer: And is that beneficial – is that good? How does that work?

Student 3: It provides me with a dictionary and WIFI to connect with the net so it makes it easier to research something that I want.

Interviewer: Very good, so again it's quite instant.

Student 3: There's words and language and it comes up what it means exactly in English.

Interviewer: So you have the two there straight away. So if you are finding something confusing, it'll clarify it for you. So just to sum up then – computers – beneficial?

All students: Yeah.

Student 5: Definitely.

Interviewer: Definitely. So can we just go round and perhaps say the best thing about computers when you're using them in education.

Student 2: It's quicker and easier, and it helps you with the research.

Student 1: Yeah definitely with research, it's a lot quicker.

Interviewer: That's a good thing.

Student 5: Type anything into Google and you get what you're looking for. When you're looking up stuff – say if you're looking up a word on the computer or Wikipedia, it's quicker than using a dictionary.

Interviewer: Very good.

Student 2: It's all in one place and you don't have to go looking for it when things go missing. And because we do have a back up system, like at least if we do loose it we'll always have it.

Interviewer: So it's not an issue

Student 4: Researching on the internet you get ten million books and you learn what you want to learn. Everyone still has different information and we can learn from each other.

Interviewer: And do you think the same?

Student 3: I think computer is the best technology for a student.

Student 1: Some other cultures there, like, give a laptop to each student.

Interviewer: I think they do that in America.

Student 5: I just think computers make it easier to learn things.

Interviewer: Can I ask, say, about using computers in class and stuff. Do you think that leads to say, people misbehaving or is it actually more productive for people working?

Student 4: It's more productive, because if you have one person at a computer, you're not all sitting round it – you're doing your own work on the computer.

Student 2: You can focus better.

Student 1: Concentrate.

Interviewer: And can you work at your own pace?

Student 4: Your own pace, aye. Sometimes if we have different tasks we can do them individually. You'll have to do it yourself anyway which means, you know, it'll be just you and everyone will have different information because there is so many websites that you can check on. It leads to great variety and we could all be doing the one thing but coming with different stuff.

Interviewer: That's brilliant, thank you so much. It's very much appreciated.

Appendix E

Sample from Observation Class


I.C.T
£9.79 a month
150 mins
300 texts
Keep your number
Keep your phone
30 day contract
GAME LEVEL 3 TIMER 00:53
HINTS / CLEAR
START / SOLVE
RESET
SOUND
SET
BONUS GIFT WITH EVERY ORDER
SUDOKU MADE EASY!
Zip through SUDOKU puzzles in no time at
Makes an ideal Christmas Gift
GUARANTEED
Beat the post
Lines Open
8am to 9pm Mon-Fri

Appendix F

Transcript from Teacher A

Appendix F Teacher A

Interviewer: Now, thanks for attending for the interview. Would you like to start off by stating the subjects that you teach and how long you've been teaching?

Instructor: I teach Food & Nutrition and Food & Cookery and I've been doing that for the last seven years.

Interviewer: Okay, what do you feel the purpose of these modules are?

Instructor: Well it's to make students more aware of the nutritional value of food. And in cases the not so nutritional value of the food that they might be eating. To make them understand the food pyramid. Right, to help them understand the food pyramid and also to understand the importance of a well balanced diet for themselves and for their family.

Interviewer: Okay and how it would impact on their lives?

Instructor: Yes and how it does impact on their lives. And I can see that.

Interviewer: Can you? Do you think that there's a difference now – there's an increase in obesity. Do you see a difference between; let's say between when you started off 7 years ago?

Instructor: Yes definitely so – they're more inclined not to cook – their food comes from the fast food and they think nothing tastes as good as fast food, you know. And to let them see that they will get enjoyment out of cooking their own food. And that if they can cook something that it's way miles better than buying fast food.

Interviewer: Is the cooking a skill that's gone in young people?

Instructor: Very much so, very much so. Even to make scrambled egg, a simple thing like scrambled egg – they would not be able to do it.

Interviewer: Gosh.

Instructor: Yeah, and 90% of my students have never tasted an omelette.

Interviewer. Wow, God, that's a real concern.

Instructor: And some are afraid to eat it because the omelette contains maybe cheese and ham and egg and they have never had that combination.

Interviewer: Gosh so they're coming in with not a lot of knowledge in relation to nutrition?

Instructor: Yes. And you ask them their favourite food and it'll be chips, curried chips, chicken dippers or whatever, burgers.

Interviewer: And do you believe it's effective, the module?

Instructor: It's very effective because you'll have someone coming in, as I say, that has never made an omelette, nor tasted an omelette – right? And you get them to do it, and you get them to taste it which is in some cases very difficult, to get them to even taste their own cooking. And then they're amazed by it, and then you go on from that. And you might do, like a wrap, you know? And move on to something else. And gradually they can see that, yeah, I'm able to do this, you know. It doesn't look difficult, I don't have to go to the Four Lights (local fast food outlet) or whatever, you know or McDonalds – I can make it myself.

Interviewer: Oh good, that's great. Is there any difficulties that you find when you're delivering your subject?

Instructor: Yes – their attendance and their literacy skills. And sometimes their behaviour in the class and we have a continuous intake that sometimes makes it difficult.

Interviewer: Yes.

Instructor: And just the fact that they just don't think that you can cook as well as you can buy is a major hurdle.

Interviewer: For them it's an easier option to buy?

Instructor: Yes.

Interviewer: And would you have people of different abilities in your class?

Instructor: Yes some have very poor literacy skills and numeracy skills. And it's quite difficult for them – like even to weigh something.

Interviewer: Gosh, yeah.

Instructor: Even to turn on the oven, when you say 150, they don't know what 150 is. Or to turn on the grill, they don't know the word grill. You know, you have to. It's nearly a one to one; it's almost a one to one all the time.

Interviewer: And then if you have people with good ability, trying to keep them working.

Instructor: Yes, well some of them are good natured enough to try and help those that are not, you know. Which would help you out. Then sometimes you have ones that if you don't keep them busy they can misbehave and this can disrupt the whole class.

Interviewer: Aye. During your module, what skills would you like to see the learners develop?

Instructor: Well, as I say, literacy skills, numeracy skills, life skills, IT skills.

Interviewer: A combination of all that there?

Instructor: Yes.

Interviewer: The literacy – how would you incorporate that?

Instructor: Well for a long time I was thinking, what could I do, you know, that would make the literacy enjoyable and plus that they would be learning you know. Put some fun into it and I came up with a bingo. Right? A word bingo and all the words are to do with cookery

Interviewer: Okay

Instructor: The foods and equipment that we would be using. Instead of numbers, I have words.

Interviewer: Oh, very good.

Instructor: Yeah the line, there's a line for that. There could be carrots or butter or sugar, you know? So that they can see the word.

Interviewer: And do you find that that's helpful?

Instructor: Oh it is because they do enjoy it. But then there's some that's not able to do that and I have a different bingo for that.

Interviewer: Okay.

Instructor: I have, say we're talking carrot – I have a picture of the carrot below it.

Interviewer: Oh very good, you have the word and the pictures.

Instructor: Yes, so you know, whatever capability they have, they can play it that way. But you know, trying to get the literacy included, the class done, keeping the class behaved and then using computers on top of that….it's frantic at times and we are expected to get them passed their FETAC Level 3. Sometimes it's easier to photocopy a few pages out of a workbook and get the class to do that.

Interviewer: What resources or support would be available to you during your teaching of the subject?

Instructor: I have a very good kitchen, great equipment. I have loads of cookery books and I have a computer and I have the internet. The literacy coordinator is great for helping me as well as all the staff. I know I could go to any of them for help.

Interviewer: Very good. And would you use ICT in your subject?

Instructor: Yes, I would.

Interviewer: In what areas would you use it?

Instructor: Well for looking up recipes or quizzes, things to do with that. Maybe making quizzes for themselves, cookery quizzes, so we would use that.

Interviewer: Excellent.

Instructor: And we would watch DVDs and videos of cookery – they find that enjoyable.

Interviewer: Oh very good

Instructor: Because in some cases, reading a recipe means nothing to them, right, okay? When they actually see it being done right? It relates more to them, they relate more to it. They understand it.

Interviewer: They understand what it means.

Instructor: Yeah, I could read the recipe 10 times to them and ask them to do it.

Interviewer: But if they see it visually?

Instructor: Yes, they have to see it, and not once maybe it might take three times.

Interviewer: So that would be great, you can rewind, forward or whatever?

Instructor: Yes, definitely so

Interviewer: Is there anything that would help you do more ICT in your classroom?

Instructor: Probably if I had more computers. But there's the budget.

Interviewer: Budgets!!!

Instructor: But in saying that, I mean I'm never refused it, you know. I'm never refused the use of the room. Even if there's another class in the room they'll always make room for one or two more.

Interviewer: Oh – this is the computer room, that you are able to use that as well as the kitchen?

Instructor: Yeah. That's helpful. I did have a problem however at one time. The students were saving their work on the network but some of their work had been deleted or destroyed. This caused some issues but the students and me. But I got some memory sticks and use them now. I have to give them out at the beginning of the class and collect them at the end but it's worth it in the long run.

Interviewer: Aye, okay so. And in relation to resources?

Instructor: Well for me personally I would like more training in IT. I did do the ECDL training a few years back. It was ok but I was doing stuff like databases and spreadsheets that I would never use in my class. It would have been far better if it could have been around stuff that I would use in my class. I know that is masses of software and stuff out there but I don't have the time to go trawling through it all. I suppose more time management.

Interviewer: That needs to be incorporated into your day?

Instructor: Cookery is very time consuming.

Interviewer: I bet you it is.

Instructor: It really is, you know. And I mean, you need a fair few classes to cook something, even the simplest thing, some people they might need three classes.

Interviewer: I know.

Instructor: Yeah. You give a demonstration, than you would read it and then they would do it themselves, you know. And then we would do an evaluation of it and tidy up and that you know.

Interviewer: So it's just getting the balance then?

Instructor: Yeah, yeah. Because ICT is getting more popular and you've got your practicals, hands on subject

Interviewer: But it seems to be working.

Instructor: Well, they seem to be enjoying it and they're looking for more and I'm pleased. We've made Easter cakes and the amount of trainees that came back and said it was the first time they've ever baked a cake, it was amazing. I mean, I've been baking cakes since my childhood, you know. And you think everyone else is doing the same thing.

Interviewer: Yes.

Instructor: And you've students who have never baked a cake. And they've baked a cake and they've taken it home, and wanted a photograph taken of it, you know?

Interviewer: Aye.

Instructor: So never underestimate that type of skill, don't take it for granted.

Interviewer: It'll carry with them.

Instructor: Yeah, definitely so.

Interviewer: That's great, thanks very much, you've been very helpful.

Appendix G
Transcript from Teacher B

Appendix G Teacher B

Interviewer: I'd like to thank you for attending the interview. If you'd like to start off by just saying your role in the Youthreach Programme and how long you've been an instructor.

Instructor: Well, I'm the Cookery, Food & Nutrition teacher in Youthreach and I've been doing that role now for about 5 or 6 years.

Interviewer: Okay, very good. And what do you feel is the purpose of the Food & Nutrition module?

Instructor: Well generally it's to give the young people some life skills around the food and nutrition problems and difficulties that they would have. A lot of them would come from low socio-economic backgrounds and they don't understand how food and nutrition plays an important role in their lives. Because a lot of them now are used to the ready meals and snacks, you know. So it's to bring that whole nutrition aspect of it to them and how it's going to affect their long term health. And to help them with their next generation because a lot of them do get married and have children very young.

Interviewer: And do you think it's been effective?

Instructor: I think it does, I think they enjoy it. Initially now they're hesitant to get into the whole cookery, looking at nutrition. But they actually do enjoy the hands on cooking aspect of it. The nutrition then, the theory of it is the more difficult side of it but once you balance that with the practical, it does help.

Interviewer: And why do you feel that the nutrition theory side of it is difficult?

Instructor: Well that would be coming from their literacy difficulties really you know. They would have difficulty reading even simple recipes and things. They find that very difficult because there would be words in it that they don't recognise. So it's really down to a literacy difficulty and the understanding that comes from that.

Interviewer: Okay, when you say a literacy difficulty, what range are we talking about? Or what difficulties are there present?

Instructor: Well a lot of our learners would have reading ages maybe as low as 8 years old, you know. And that can present terrible problems, even when you're shopping and looking for different items and things. Literacy can become a big problem there.

Interviewer: And in relation to you as an instructor trying to deliver the programme, what would difficulties would that pose for you?

Instructor: Well all these FETAC modules come with an element of written work as well and we have to deliver the theory and get them to enter different written pieces for their portfolio, as well as recognising the recipes and different things. There's a lot of challenges there trying to get that written work across to the young people, and recognising the key words and, you know, being able to use them then in their everyday lives as well.

Interviewer: I know you said there that it's a practical subject but do you use ICT in your subject? What resources would be available to you?

Instructor: Well ICT is great; it's really opened up the whole subject to the young people. Because not only can you make your worksheets, you can adapt them literacy wise and add pictures and different things. For instance if they were cookery you could put in pictures of the utensils that they require, so that they know, instead of me saying to them. Because they don't even recognise some of the utensils, they're not used to using them at home. They can actually get the pictures of the utensils, go to the cupboard and get out what's needed for the cookery lesson. And then you can also use the ICT for the worksheets, for the recipes. Obviously numeracy is also a problem so you can use the worksheets for that as well and make the print very adaptable to them. Then also when we're back in the classroom situation there's the overhead digital projector and we do sometimes have use of the interactive white board which is great as well.

Interviewer: Okay. How do you feel about the learners in the programme – do they like working with the interactive white board or go they gain much from it?

Instructor: I think they love it. They love – there's quite a few little exercises around nutrition, the food pyramid, and matching those words. It lightens the whole theory side of it as well. It makes it very much hands on for them too. And more involved.

Interviewer: More involved definitely. And you incorporated into your lessons stuff like worksheets then? Is there anything that you feel could help you to use ICT more in your class or do you feel that you're using it enough because it is a practical subject?

Instructor: No, because if there was a digital projector in every class it would be a help. We don't have one in every classroom at the minute and I think it's very important because we would even, I would even take photographs of them while they're doing their cookery classes and then if you can put them up there, it reminds them afterwards when you're talking to them what exactly they were doing. Because obviously everybody can forget. So if you have photographs of them, say, mixing, you know, beating and doing different things then that can bring up the whole discussion then in the classroom. Unfortunately we don't have enough equipment.

Interviewer: Yes.

Instructor: And there's times when you're in a classroom which will not have any equipment at all. So more digital projectors would be great and obviously if we could afford more interactive white boards.

Interviewer: And has training been provided to you?

Instructor: We've had limited training. There is limited training available particularly on the interactive whiteboard but we have a very supportive staff, and the ones who know something about IT are very good about sharing it with others. And I think that's important because if you see what somebody else can do well then it inspires you to go on ahead. So more training would be great, even if it's an informal training in amongst the staff themselves. More time for training would be great.

Interviewer: And as a staff member yourself, would you have any recommendations how ICT could be improved within the Youthreach programme?

Instructor: I think probably giving the staff more courage, I think, to use it. And obviously to make them realise that, you know, that it's not as time consuming as they think it is. You know, a lot of them just don't have the courage to start using it. And again you could have something ready on your laptop or whatever to prepare and then you might be put in a classroom that doesn't have ICT so it's wasted, you know. So obviously the resources and the training and everything would go hand in hand.

Interviewer: Alright, that's great. Thank you very much.

Instructor: No problem.

Appendix H
Transcript from Literacy Coordinator

Appendix H Literacy Coordinator

Interviewer: Right thanks for coming. I'll just start off now – if you tell me a wee bit about what your role is involved in the centre?

Co-ordinator: I've been here working in Youthreach, in Letterkenny for 12 years and at the moment - my role – I'm the Literacy Co-ordinator for Youthreach.

Interviewer: And what does that involve?

Co-ordinator: It involves quite a lot of different things – for example when they come into the centre as new learners – one thing I do is that I profile them. I profile them in their reading, their spellings and in their mathematics. And I write up reports and then I give a copy to the rest of staff so they're very aware of where all the students are actually at. When they come into the centre – which of the classes that they should actually go to. I also help and support staff to integrate literacy into their subject area. We have a literacy policy and integrating it across the curriculum is very important. Literacy can't be seen as stand alone. If everyone took five minutes during each class to focus on literacy it would make such a difference.

Interviewer: Okay. And what would you find would be the average, say, literacy or reading age in English?

Co-ordinator: Strangely enough, I can say there are times when you would have students who would be roughly around – their reading would be around 8 years, maybe 8½. Now the spelling would be quite weak with an awful lot of students. You could have a batch of students that come in maybe who are very very good and recently a lot of them, their reading has actually been very good.

Interviewer: Okay, but literacy can be an issue – can it?

Co-ordinator: Definitely, there's none of them that doesn't need help with their reading – very few of then actually. They wouldn't all be where they should be at with their reading and their spelling.

Interviewer: And within your role then – do you feel that it's effective and that it gives staff a good idea of what level students are at?

Co-ordinator: Well I certainly think so because usually at the staff meetings I would hand out that information to the staff members and what they do is look at where they're at with their reading and their spelling and their maths and they can see where the problem areas are and they can pick up on it from there. As I said earlier a team approach is needed in the area of literacy and it has to be integrated in all subjects to have maximum benefit for the student.

Interviewer: Okay. For you, yourself, in your role – what difficulties would be present for you?

Co-ordinator: Well attendance would be one area because you would have a student and you would do out a little lesson plan for him. And then you mightn't see them for maybe two weeks and you have to go back and find out where you were at and start off again so it is ongoing. If attendances were good, you'd see a greater improvement in them. Confidence and lack of self esteem are also issues. When a student has low confidence and self esteem this has an impact on their work and when you see an improvement in this area you usually see an improvement in their work as well. It's great to see that. A lot of the students come here from mainstream schools and they would have a negative experience there and they expect here to be the same. It takes them a while to realise that it's different here and for them to get used to that.

Interviewer: And probably again there'd be various levels? Would there people be coming in with the very basics?

Co-ordinator: Oh there would, there would be yes. And then there's the foreign nationals whose English isn't their first language and then that causes a major problem as well. Then there's some that would have some learning difficulties. Some probably with ADHD and some with dyslexia as well. You would be dealing with all different difficulties and abilities within the classroom and this can be difficult to teach but allowing for differentiation is very important in Youthreach.

Interviewer: Okay, so you have a wide variety of issues and difficulties?

Co-ordinator: I would have, yes.

Interviewer: What resources, Bernadette, are available to you?

Co-ordinator: Well that's one thing I will say, we have loads of different resources. We have loads of books, from different age groups. We have the CD-ROMs, we've got literacy software, we've got the internet, we've got computers and, you know, sometimes we put booklets together ourselves too, and what we would think would be beneficial for a particular student. And I think that's a great help. It's quite easy to put stuff together like that.

Interviewer: And that suits their need, sort of?

Co-ordinator: It suits their need.

Interviewer: Would you use ICT / computers within your area?

Co-ordinator: Oh I would definitely. For example, the new literacy programme – I made sure recently there that was put on all the computers in the centre and there's a huge amount of information there, from grammar to phonics and reading, etc.

Interviewer: What is the new Newell Literacy Programme? Is that a software package that you've put on every computer?

Co-ordinator: It is.

Interviewer: For staff or learners?

Co-ordinator: Well it's for both very much so. It's for staff, it's there and at meetings and different occasions I've said, you know, the information is all there, all you have to do is access it and it would be very helpful for them to do that.

Interviewer: Okay, and do you feel that ICT / computers is beneficial to the students on the programme?

Co-ordinator: Definitely, because you can go into the internet and there's a variety of information there for your students – again at different levels – there's even short stories there for reading, there's all kinds of exercises that you can print out as well. There's a huge amount of information on the internet that they can access.

Interviewer: Staff or the learners? Both again?

Co-ordinator: It would be the learners.

Interviewer: And say going back to Newell there that you mentioned, what was the benefit of putting that on the computers?

Co-ordinator: Well for example, if there was a period, say for example if the staff member was missing like, well maybe if they had to fill in for a class, it's one area where they could that they could take their students and they could go into the programmes and they would learn a good deal from doing that. It also allows for differentiation within the class and this helps the teacher.

Interviewer: You mentioned there that there are learners perhaps with learning difficulties, specific learning difficulties. Do you feel that ICT is beneficial to those learners, perhaps like with literacy difficulties?

Co-ordinator: Definitely yeah because there's a lot of different programmes on there – there's actually programmes on for people that would have dyslexia and would have reading and literacy problems. There's numerous resources there. It also helps the students who wouldn't be the best at writing. Word processing is great for them. It help build up their confidence and then when they get better they can practice the writing and spelling. It's very disheartening for a student to have to write and rewrite a piece of work. They can save their work and use spellcheck if they are not sure about a work.

Interviewer: Ok. Would there be any disadvantages to using this/

Co-ordinator: Well one to two sometimes. I think some students were printing, doing stuff and they actually couldn't read it or understand it. I think it's important that they're doing word processing with information that they're able to read or have some knowledge around.

Interviewer: What would help you in your role Bernadette?

Co-ordinator: Well for example we have an interactive white board here in the centre at the moment and I feel that, well I feel personally that I don't have any access to it. I certainly would need some training in it so that I'd be able to operate it but I think that that would help because you could bring them in for a class, maybe once a week or whatever, and you could, you would have all the information there in front of you and there's a huge amount of information on it. You can access loads of different programmes on it as well.

Interviewer: Have you received any ICT training?

Co-ordinator: Yes we had the opportunity a couple years ago to do the ECDL. I found it really useful and would use a lot of what I learnt during both my classroom work and administration work.

Interviewer: Alright, thanks very much.

Co-ordinator: Thank you.